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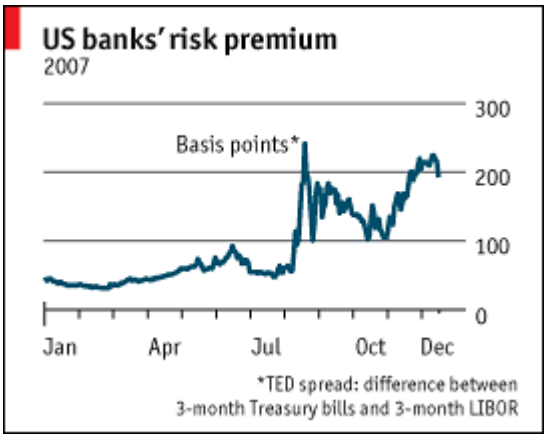
The credit crunch

Postcards from the ledge

Dec 19th 2007
From The Economist print edition

There is certainly a path out of the gathering banking crisis, but no guarantee that the world economy will find it



A CREDIT crunch, a liquidity squeeze, a subprime meltdown—the shape-shifting menace that has vexed the world in 2007 has been all these things. But now it looks like becoming a banking crisis as well. The grievous experience of two centuries of financial busts is that when the banking system is in difficulties the mess spreads. Straitened banks lend less, sucking money out of the economy. In rich countries that threatens to tie down companies and give ailing housing markets a kicking. The data barely show it yet, but the financial malaise could yet be aggravated by a broader economic malaise.

Back in October it briefly seemed as if the summer's turmoil was abating. But a month later investors' confidence took a giddying turn as the weakening American housing market jeopardised the banks' capital. In December the leading central banks acted together to jolt the money markets into life. On December 18th the European Central Bank lent almost €350 billion ($500 billion) to tide banks over the new year. And yet most fear-meters, including, crucially, the price banks have to pay for funds (see chart), still register chronic anxiety.

This raises two broad questions. How gravely will the economy suffer? And what will become of the financial innovation that promised so much, but has proved so treacherous?

Subprime suspect

For answers, start in America's housing market, where the crisis had its origins. Subprime borrowers will probably default on $200 billion-300 billion of mortgages. That is a lot of money, to be sure, but hardly enough to imperil the world economy. For that, you need the baroque superstructure of mortgage-backed derivatives that enabled investors to bet on the housing market. From a mathematical viewpoint, the combined profits and losses on these derivatives will, by definition, cancel out, so they should not add anything to the total underlying loss. But that is only half the story. Individual investment vehicles may have sustained huge losses, especially if they borrowed heavily: it is the fear that your counterparty might be in that predicament that is gumming up the markets.

In theory the damage is safely contained off banks' balance sheets. But then, in theory American house prices never fall. The banks have belatedly discovered that they cannot just abandon their failing progeny of SIVs, conduits and the rest—at least if they want a reputation worth having. Worse, the banks now facing up to these contingent liabilities have not had to set aside capital in case of trouble—that gap in the regulations was precisely what made it so attractive to get their investments off the balance sheets in the first place.

November marked the stomach-churning moment when investors realised that the housing market was falling, that the losses would be big, that the banks would end up owning them, and that they had not put capital aside for the job. To make a bad case worse, nobody knows which bank is sitting on which liability. Every bank is suspect and any bank seeking to raise money by selling a position is more suspect than ever. As fear has played upon this lack of information, the money-market funds have gone on strike, cutting off the interbank markets' main source of cash, and the (embryonic) market for complex mortgage-backed derivatives has closed. It is an alarming mix of hiatus and distress.

If you put all that together, it is easy to see why an economy burdened by debt and a housing bust is in extra danger. Starved of funds and facing not just losses but lawsuits (see article), the banks are hoarding liquidity and capital. That can create a vicious circle. As the system of leverage that magnified credit collapses in on itself, borrowing becomes harder and demand falters. The rot can spread from housing to other areas, such as commercial property and credit-card debt. If the money-market funds then withdraw even more of their longer-term lending from the banks, then banks will need to conserve yet more capital. And so it goes dismally on.

Just take the hit

Nobody yet knows whether the extreme borrowing in the credit boom was a sensible result of the powerful new machinery of debt, or the sort of excess still unwinding in Japan: the lawyers will argue about that. But if the downward spiral takes hold, America will end up in recession and so quite possibly will Europe. The need is to break the chain—which leads back to the financial system. It urgently needs attention.

The markets will not recover until lenders believe the banks have credibly owned up to their losses. Sometimes this is best done when a bank chief has quit, as at Merrill Lynch. Often, the reckoning is more convincing when the bank has absorbed its off-balance-sheet ventures—as at HSBC and Citigroup. That is a risk, because it can weaken the banks' capital base and because the assets can fall further in value. But it is better than leaving the mess to fester and investors to fear the worst. Some banks will need fresh capital. UBS sugared a huge loss by announcing billions of dollars of new capital from government-backed funds in Singapore and the Gulf. Citigroup took $7.5 billion of Abu Dhabi's money. Others are sure to need help—and may well turn to sovereign wealth funds, too.

There is an irony in seeing state-owned investors bail out capitalism's most ardent exponents; back when money was plentiful, the government outfits were rebuffed. But the banks are less choosy now. Moreover, the frenzy of innovation around debt and securitisation got out of hand. Risk was supposed to be bought by those best able to afford it, but often ended up with those seduced by yields they did not understand. Mathematical brilliance was supposed to model risk with precision, but the models evaporated along with the liquidity that they had failed to quantify. Rating agencies were supposed to serve the market, but their first loyalty seems to have been to the issuers who were paying their fees.

Finance now needs a flight to simplicity—to tame the jungle of investment vehicles, to reform the rating agencies, and to price liquidity risk. In a few cases regulation, chiefly aimed at transparency, looks justified. But do not expect the ethos of finance to change—or even wish that it were so. The system will purge the worst complexities of the past few years of its own accord. The tools of modern finance are too valuable to be cast aside. Securitisation makes assets easier to sell. Derivatives, used well, increase financial flexibility. And opportunists with names like Goldman Sachs and Cerberus are just the people to pick over the carcass of the credit boom and make a market where none exists today. When they put their billions to work, you will know the corner has been turned.

Back to Ben

Until that moment, the burden will fall on the central banks. They have tried to help by tinkering with the technical operations that supply liquidity (though they keep overnight interest rates on target by draining money elsewhere). By and large, this has failed: the banks' problems are not technical, but real.

Monetary policy matters far more and central banks must weigh the short-term danger to the economy against the medium-term threat to their own standing as inflation fighters. If the economy looks likely to weaken, further interest-rate cuts will be needed. But the effect of any rate cut will be lessened by those wide, fear-induced spreads in the money markets. And the severity of the slowdown is unknown. If central banks overestimate this and cut too much, it will fuel inflation, already stoked by demand in the emerging economies. Inflation is above target in the euro zone and (by a shade) in Britain and rising in America. It is a recipe for repenting at leisure.

The hope is that the credit markets unblock themselves and that buoyant emerging markets buy rich-world exports and recapitalise rich-world banks. The fear is that this crisis will assume yet more guises before it takes its leave—especially if politicians try to seize control. Bankruptcies, recession, litigation, protectionism: sadly, all are possible in 2008.

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Global warming

Some like it cool

Dec 19th 2007
From The Economist print edition

The glacial pace of global negotiations on climate change argues in favour of local, sectoral regulations

EPA

THE final hours of the Bali conference on climate change might have been scripted in Hollywood. The tension mounted between America and its allies on the one hand, and Europe and its allies on the other. The deadline for agreement passed, and had to be extended. The UN secretary-general, Ban Ki-moon, begged for compromise. One of the American delegates, Paula Dobriansky, was booed. Yvo de Boer, the executive secretary of the United Nations Framework Convention on Climate Change, and boss of the conference, wept, and had to be helped off-stage. The situation was deadlocked; the planet doomed.

Who would save it? The little guy, of course: Kevin Conrad, a (conveniently handsome) delegate from Papua New Guinea, a poor but beautiful country condemned to sink beneath the waves unless the big powers act. He leant towards his microphone, face taught with emotion. “If for some reason you are not willing to lead,” he said, referring to an arrogant comment on leadership by one of the American delegates, “leave it to the rest of us. Please—get out of the way.” The applause was thunderous. Minutes later, Ms Dobriansky crumpled. “We will go forward and join consensus,” she said. There were sighs of relief and gasps of elation. The planet was saved. It was, everybody agreed, an historic agreement.

Sadly, the substance did not remotely match the storyline. The only real achievement at Bali was a decision to set up a pilot project to investigate how to stop tropical deforestation (see article). Aside from that, the conference, with 15,000 delegates, activists and journalists, cost a great deal in money, carbon and political energy and produced nothing but a vapid statement of good intentions, from which America ensured that all substance was removed. An international agreement to replace the Kyoto protocol, which runs out in 2012, does need to be reached. But negotiations will get nowhere until 2009, when this American administration will probably make way for one that takes climate change seriously.

The glacial pace of progress towards a global agreement contrasts with what is happening in Europe. After a row last year with carmakers, which had failed to meet voluntary emissions targets, the European Commission is about to force them to limit the carbon intensity of their fleets (see article). Europe is particularly hard on its car industry; but other countries are picking on road transport. China has imposed fuel-economy regulations, and America's Congress has just approved a bill tightening its own. By 2020 California will require all the petrol sold there to meet a low-carbon standard.

And the mercury goes on rising

This is not the best way to go about cooling the planet. Ideally, the world would set a global carbon price

(through a tax or a cap-and-trade system) that charged industries for the damage they do to the environment and thus shifted the economy away from carbon. A patchwork of local, sectoral rules risks piling on layers of regulations that distort incentives, raise costs excessively and prove hard to sweep away if and when a better system eventually emerges.

However, as Bali showed, politics has a habit of undermining economics. A global carbon price remains a distant hope, and the planet is getting warmer. In its absence, targeting dirty industries is a stop-gap. And the experience of cutting sulphur emissions in America in the 1990s argues that second-best solutions can give way to the best: regulations on power stations were eventually superseded by a successful cap-and-trade scheme that cleared the stuff out of America's air.

Europe's carmakers, of course, are not best pleased with the commission's plan. Although the French and Italians, with their lighter cars, are shrugging their shoulders, the Germans, with their hefty gas-guzzlers, are furious. That's understandable. Meeting these regulations is bound to be uncomfortable now. But there will be an upside: when some future Bali really does produce an historic agreement to cut global emissions, greener companies of all sorts will be better placed to compete in a low-carbon world.

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Democracy in Africa

For all its flaws, an example to others

Dec 19th 2007
From The Economist print edition

The example Kenya can set for South Africa and the rest of the continent

AFP

Get article background

IN AFRICA, a hard-fought but fair election in a pivotal country is an example-setting event. No, this is not South Africa, where the election of Jacob Zuma as president of the ruling African National Congress on December 18th dealt a shattering blow to his rival, Thabo Mbeki. Although this puts Mr Zuma in a strong position to lead South Africa when Mr Mbeki's second term as president ends in April 2009, his succession is far from certain (see article). In Kenya on December 27th, however, power may very well change hands after the tightest electoral contest in the country's history.

Kenya may not be as sexy as South Africa, but as a haven of stability and prosperity in eastern Africa the quality of its democracy matters. Its northern and western neighbours—Sudan, Ethiopia, Uganda and Somalia—suffer in various degrees from war, tribal conflict, government repression, separatism and all that follows. From the countries of the war-ravaged Great Lakes region, such as Congo and Rwanda, Nairobi appears an oasis of calm. But this success is relative. Kenya itself has long been beset by bad governance, corruption and tribalism. Despite receiving billions of dollars of aid, most of its 35m people remain poor. True, few countries have had to contend with the ethnic complexity of Kenya, which has more than 40 recognised tribes. Nor does erratic weather help a largely rural economy. But the main culprit is a system of politics in which a ruling class has hogged most of the cake for itself.

That is why the unusual sharpness of this election campaign is so encouraging (see article). Mwai Kibaki, the 76-year-old president seeking a second term, has presided over economic growth of about 6% this year. Having tolerated greater political and press freedom than his kleptocratic predecessor, Daniel arap Moi, he promises to extend free schooling and fix a decrepit infrastructure. But he has failed to attack corruption in high places with any vigour; indeed, he has let some of the worst crooks stay in government.

His leading opponent, Raila Odinga, who is 14 years younger, is a more energetic figure who now disavows his past socialism and East German education while still appealing to the poor and to some of the marginal tribes, particularly his own Luo in the west and the country's Muslims in the east. Mr Kibaki, by contrast, has long been at the heart of the Kenyan business establishment which his own Kikuyu tribe, the country's largest and richest, dominates. Although polls give Mr Odinga the edge, the president's media machine may help him catch up by the vote on December 27th. Both candidates have flaws: Mr Kibaki's departure is overdue, but the more energetic Mr Odinga's campaign carries a divisive flavour.

In place of strife

Whoever wins, what matters next is that the result should be accepted by the loser and Kenyans should be seen to endorse the principle of peaceful competition. Most of Africa has left behind the era of the one-party state, but its people have yet to be fully persuaded that multi-party politics need not be chaotic. South Africa's ruling party seems unhappy to have submitted itself to an internal contest that has humiliated President Mbeki, who himself seems loth to badger neighbouring Zimbabwe's dictatorial Robert Mugabe into holding fair elections. But if a country as complex and poor as Kenya can hold genuine elections without civil strife, then any country in Africa can. This is its chance to set an example.

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The presidential race

In praise of the primaries

Dec 19th 2007
From The Economist print edition

Iowa and New Hampshire perform a vital function

Illustration by Claudio Munoz

IT IS easy to make fun of Iowa and New Hampshire. These two states, with a combined population of 4.3m mostly white people, will soon kick off the 2008 primary season (see article)—and also influence the presidential race out of any possible proportion to their size. Ethanol subsidies for greedy farmers, bleak midwinter meetings in rural diners, humourless men in lumberjack shirts: all come in for their share of ribbing. What an absurd way to choose a president, sneer many non-Americans, perhaps forgetting their own arrangements (the coronation of Gordon Brown as Labour leader and prime minister, without a single vote, springs to mind).

In fact, the primaries system, once again, is working pretty well. There is a basic reason why Americans don't seem seriously interested in challenging the position of the kick-off states: in the end, it doesn't really matter which states start the ball rolling, so long as they are small. For the past four months or so, and now at a hysterical pitch, America's presidential candidates have been forced to campaign for their lives in these unlikely arenas. Slick TV ads alone will not cut it, as they must in bigger states where meeting more than a fraction of a percent of the electorate is an impossibility. Iowa and New Hampshire want their candidates up close and personal.

This imposes immense, and immensely testing, challenges. Money and organisation matter far less than stamina, agility and that most unfakeable of all political attributes, charisma. Anyone deficient will be found out: anyone with the right stuff has a chance to shine. The bruising campaign has already seen Hillary Clinton's star wane, as she has shown herself tetchy and hectoring, and her panicky operatives have been caught playing grubby tricks; Mike Huckabee, an unknown from Arkansas, has soared to recognition on the back of his folksy ability to reach out to evangelical Christians without alienating those of more restrained faith. A field of some 20 hopefuls has already been winnowed down to six or so.

What happens in these two states does not stay there. Thanks to the internet, anyone can scrutinise every aspect of the “retail politics” stage of the American presidential contest as it is played out in Iowa and New Hampshire. Gaffes, slurs, foolish e-mails, the commentaries of local papers and the blogs of humble voters are all available to the global village.

The two earliest states are not just a giant focus group; they are the first leg of a pentathlon—a competition designed to pick the best all-rounder. In their wake come Nevada (disproportionately Hispanic), South Carolina (disproportionately black) and Florida (disproportionately big). Finally, on February 5th, the presumed finale: some 20 states will hold their primaries and caucuses—a contest fought out through television advertising (a function of money-raising skills) and get-out-the-vote operations (a sure test of organisational ability). Just like the athletic pentathlon, you don't have to win

the first event (Bill Clinton was beaten in both Iowa and New Hampshire in 1992); but it is front-loaded. Momentum counts for a lot.

Run, rabbits, run

That is not to say that the primary system has no flaws. In its nostalgic moments, *The Economist* wishes the whole thing still started later. In 1968 the New Hampshire primary took place in March. It is not just that the skiing is better then; a later start would stop the primaries from monopolising so much of the previous year's politicking. Ideally, the pentathlon should last longer too—giving more time for retail politics elsewhere. Iowans have their faults, notably their antipathy to farm reform. And, yes, the system can throw up duds as well as Ronald Reagans. That, though, is a feature of all styles of government. Americans will soon make a freer and better-informed choice than citizens in other democracies ever can.

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Genetically modified wine

Unleash the war on terroir

Dec 19th 2007
From The Economist print edition

An oenological wish-list for the drinking season

Illustration by Claudio Munoz

FOR the beleaguered winemakers of France, threats come in many guises. One French grower complained that each bottle of New World wine that lands in Europe is a “bomb targeted at the heart of our rich European culture”. But few things agitate French winemakers more than other winemakers' unspeakable irreverence towards the *terroir*, the mix of soil and climate found in the place where a vine is grown. The strength of feeling is so great that the country even has its own breed of, er, *terroiristes*. A group of masked, militant French winemakers has attacked foreign tankers of wine, bricked up a public building and caused small explosions at supermarkets.

Now France's balaclava-clad winemakers have a new horror to see off: transgenic wine. Scientists have unpicked the genetic secrets of pinot noir, the grape that produces some of the world's finest wines and also contributes to some blends of champagne (see article). It turns out to be the offspring of two very different parent varieties—they have less genetic material in common, in fact, than humans do with chimpanzees. The researchers' findings, which cast light on the origins of pinot noir's subtle flavours, will make it easier to engineer new varieties that can grow in places where cultivation is impractical today. Efforts to create transgenic grapevines are well advanced, and transgenic wine yeasts are already starting to appear in American winemaking.

Alas, those working on transgenic vines have failed to heed the lessons of earlier GM-food fiascos. They are creating what the producers want (disease-resistant grapevines) rather than making tweaks that also appeal to consumers.

What sort of traits might consumers want, you ask? More reliable flavours for one thing. No longer need you doubt whether a wine truly does possess flavours of exotic coffee, chocolate, Asian spice, roast duck and blackberry and prune liqueur. Genes from those very animals and plants could be spliced straight into the grape's genome. Forget hours spent swilling, swirling, sniffing, gurgling and spitting—it will all be there in black and white, in the sequence data.

From Saint-Amour to Viagra

Why should sauvignon blanc be stuck with boring old gooseberry and cabernet sauvignon with cassis? Genomics could beget some novel wine flavours and combinations to ensure the wine really does go with the food: pinot noir with cranberries, pork, and sage and onion stuffing, perhaps.

And why stop there? It would surely be wise to boost the levels of wine's beneficial ingredients and add a few more for good measure. Consistent amounts of resveratrol, quercetin and ellagic acid will help improve cardiovascular health and may even confirm what the French have known all along—that drinking red wine is good for you.

A gene for producing acetylsalicylic acid, better known as aspirin, would help to prevent heart attacks and blood clots. You could get your doctor to supply your daily half-bottle by prescription. The aspirin's analgesic effect would head off hangovers before they even started. Caffeine could be added to keep drinkers awake during boring dinner parties. And it may even be possible to insert a gene to produce sildenafil citrate, the active ingredient in Viagra. For many men that would help to prevent the ultimate wine-induced humiliation.

The possibilities are endless—all that is needed is a little imagination. Too bad if all this leads to an outbreak of militant shrugging among the good vintners of Burgundy. Times have changed. Scientists have a clear duty. Following the lead of many world leaders, they must make it clear that they are not willing to negotiate with anyone who supports *terroirisme*.

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On spelling, universities, ships, Britain, Bangladesh, pigs, German words

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From The Economist print edition

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FAX: 020 7839 2968 E-MAIL: letters@economist.com

As easy as ABC?

SIR – Your article on education described how some industrialised countries are finding it difficult to improve standards despite substantial increases in spending on schools ("The race is not always to the richest", December 8th). One factor often overlooked when trying to raise standards is the spelling systems of languages, which can make it very hard for some children to learn to read and write. Finland and South Korea perform consistently well in education tests. It helps that their languages have spelling systems that make learning to read and write exceptionally easy.

English spelling is uniquely complex. Because it spells many sounds differently it has at least twice as many spellings than any other alphabetic system. But learning to read English is made even harder by the many spellings that also have different pronunciations: on/only/once; ear/early/bear; food/good/flood. That is why most English-speaking children can be slow at learning to read unless they get substantial one-to-one help from parents or teachers.

Children whose parents have their own literacy problems are particularly dependent on help from school and are also more prone to be turned off reading and learning for the rest of their lives. Countries that have sounder spelling-systems and less literacy failure have all modernised their orthographies. English needs this remedy more than most.

Masha Bell
Wareham, Dorset

Extra-curricular

SIR – The fact that American colleges are rushing to build spectacular new buildings illustrates how nothing has really changed since Adam Smith made the observation some 230 years ago that the primary purpose of universities is to serve as an enclave of privilege for faculty and staff ("Just add cash", December 1st). Coming a distant second is the role of education. When I began my junior year at a university in Michigan in 1969 a year's tuition was $480. Adjusted for inflation, that should now be around $2,900. Instead the tuition is $9,000, and the quality of teaching certainly hasn't improved much. Universities are like black holes, and will suck in every dollar they can lay their hands on.

S.A. Morris
Saginaw, Michigan

Ocean sounds

SIR – Concerning the incorporation of electric drives as a feature on warships, it is noteworthy that diesel-electric propulsion in various forms has been used for many years in numerous American oceanographic ships ("Making waves", December 8th). Most of these were built and owned by the United States Navy but operated by civilian universities and research institutions. Examples include the vessels *Thomas Washington*, *Melville* (refitted to diesel-electric in 1992), and *Roger Revelle* at the Scripps Institution of Oceanography, as well as several ships at other institutions.

Thus, the navy, via its Office of Naval Research, has considerable and long-term diesel-electric experience available within its extended fleet of ownership in addition to the navy support vessels you mentioned. Many of the attractive features of electric drive that are envisioned for warships can also be

applied to ocean research. A further advantage not noted in your article, but which is useful for science and perhaps for some warship applications, is the increased ability to uncouple engine vibration from the hull, thereby enhancing the performance of some on-board acoustic systems.

Robert Knox
Research oceanographer
Scripps Institution of Oceanography
San Diego

Friendly natives

SIR – Bagehot linked recent political party-funding scandals in Britain to a scramble by wealthy outsiders to get a seat at the "top table" of society (December 8th). My experience as an immigrant in Britain is that you have to sit quietly and patiently in the company of the locals for years—in health clubs, bars, at the school gates, and at work— before you are welcomed into simple conversation about the weather, let alone "the inner sanctum of Britishness". The reward for patience is long, deep and meaningful friendships, plus a newly acquired sense of guarded scepticism and fear that the comfort finally achieved will be disturbed by someone new. Most of the time this is fine, but sometimes a warm, friendly and open conversation with a stranger would be welcome, even if it did end with "Have a nice day!"

Carolyn Gibson
Birmingham

Bangladesh's past

SIR – Regarding your recent article on Bangladesh ("Guilty at birth?", December 8th). The party I lead, Jamaat-e-Islami, strongly denies any link with the atrocities committed during the war of independence in 1971. It also denies any involvement whatsoever with the abduction and murder of journalists and academics. I would also point out that I was never a member of Al Badr nor did I ever lead that organisation. Furthermore, I ceased to become the head of Jamaat's student wing from October 1971 and did not hold any post in Jamaat until long after Bangladesh's liberation.

Jamaat is a moderate Islamic party that believes in democracy and human rights and is strongly committed to upholding the rule of law. Jamaat's position has always been that if any allegations made by a future war-crimes tribunal against a member of Jamaat are proved to be true in a court of law, then we are ready to face the consequences. In the past 36 years, no one, not even the relatives of the victims' families, has taken any step to institute legal proceedings against the alleged perpetrators of war crimes.

Motiur Rahman Nizami
Jamaat-e-Islami
Dhaka

Enjoy that Christmas ham

SIR – I find it amazing that people want to lessen the stink from pig farms by "modifying" the pigs' diet ("The hunt for the odourless pig", November 24th). Instead of modifying animal diets, what about modifying human diets? I am not suggesting, God help me, that we all turn to an entirely vegetarian menu, but eating less meat would mean that farms do not have to grow so large and the "stink" would not be so strong. Is the link not obvious? Want a sweeter smell? Eat less bacon.

Lauren Tartaglia
New York

Mind your language

SIR – Your review of a book on German politics mentioned a debate in which Joschka Fischer, when he was a young member of the Green Party, called the president of the Bundestag an "asshole" ("Local hero", December 1st). Herr Fischer almost certainly used the German word *Arschloch*. Given the native spelling, and your newspaper's inclination to follow British practice, might I suggest that "arsehole" would have been a better—and, to these ears, more euphonious—rendering? Inexplicably, your style guide is silent on this particular point of usage.

Jakob Whitfield
London

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Iowa

The nightmare before Christmas

Dec 19th 2007 | CRESTON
From The Economist print edition

For presidential candidates, the holiday season will not be restful

Illustration by Kevin Kallaugher

Get article background

EVEN those who dislike Hillary Clinton want to hitch a ride in her helicopter, inevitably dubbed “the Hillacopter”. With a dozen presidential candidates criss-crossing Iowa to scramble for support before the caucuses on January 3rd, everyone following them wants to be in several places at once. And the roads are icy.

Parking is like curling. The main roads have been salted well, but not perfectly. Your correspondent spun once on black ice and saw three accidents. After dark, the oncoming traffic includes farm trucks with only one headlight. Mrs Clinton only has to dodge heckles.

The locals grumble more about the weather than politics. In a coffee shop in Creston, a small town south-west of Des Moines, the customers form two groups: those whose electricity has been restored since a recent storm, and those who are still waiting. “We're living like cavemen,” chuckles one of the staff.

When talk does turn to politics, the mood is disgruntled. Between mouthfuls of syrup-soaked pancake, Dalyne Gaede laments that he can no longer find work. He used to help make sophisticated machinery: self-service cash registers for Wal-Mart and trash cans that say “thank you”. But then he needed back surgery, and suddenly no one will hire him because his health insurance is too expensive.

A triumph in Iowa can kick-start a candidate towards his party's nomination. Yet turnout is usually low. Out of a voting-age population of 2m, only 130,000 caucused in 2004. More will probably show up this time because both parties are competing and the races are close. On the Democratic side, Mrs Clinton, John Edwards and Barack Obama all have a shot. Mr Obama is slightly ahead, but Iowa polls are habitually unreliable. Among the Republicans, Mike Huckabee has opened a sizeable lead over Mitt Romney, but with his new prominence has come unaccustomed scrutiny.

Every candidate faces a holiday season without rest. Most will campaign until as close to Christmas Day as they can without interrupting the festivities. The Democrats especially are working harder than ever, inflicting their friends, families and celebrity endorsers on hapless Iowans.

Besides firing up their existing supporters and courting undecided voters, they are also trying to

persuade their rivals' supporters to make them their second choice. Under Iowa's caucus system, voters will gather in some 2,000 small precincts and discuss the candidates before selecting their first choice. Under the Democrats' version (though not the Republicans') those whose candidates fail to win more than 15% or so of the votes in a precinct are then invited to transfer their vote to another, “viable”, candidate. This takes time, so only the most motivated take part.

Each candidate has a different style. Mrs Clinton leads her troops through the snow with such discipline that, had Napoleon copied it, he might have conquered Russia. Other Democrats' campaign staff are happy to answer questions. In Des Moines, Jim Mowrer, an Iraq veteran, says he supports Joe Biden because he is the only Democrat with a plan to quit Iraq without leaving chaos behind. The Clintonistas beside him say they are not authorised to talk to the press.

At Mrs Clinton's campaign office in Creston, the lone staffer consults his boss by telephone. His boss tells him not to reveal anything. Not even his personal reasons for liking Mrs Clinton? No. Not even where a guy can get a cup of coffee in Creston? The staffer hesitates before divulging this potentially sensitive information.

At Mr Obama's campaign office in the same town, the welcome is warmer: a seat, a cup of coffee and a list of local Obama-ites to call. Karl Knock, the chairman of a local bank, says he likes the openness of Mr Obama's campaign. The candidate does not simply issue orders; he asks questions. America needs a new leader who is not entrenched in old battles, he says.

Mr Edwards, a former trial lawyer and vice-presidential nominee, is running the angriest Democratic campaign. Though his manner is smooth and smiley, he rails without cease against the greedy corporations that supposedly make ordinary Americans' lives miserable. He lies third in the polls in Iowa, but his tireless stumping in remote hamlets might conceivably allow him to snatch a victory.

Mrs Clinton is still the woman to beat, however. Other candidates pander. She does her homework and then micropanders. For voters who fret about the environment and globalisation, she praises solar power. Someone has to screw those solar panels on the roof, and that's a job that can't be outsourced, she tells a crowd in a fire station in Shenandoah, near the Nebraska border.

Are you worried about violent video games? So is Mrs Clinton. They can lead, she says, to horrors such as the recent massacre in a mall in Omaha. Mrs Clinton knows the name of the local man who was injured there, of course. She's really intelligent, agree several members of the audience. But one couple say Bill Richardson, the governor of New Mexico, is more qualified. A paranoid local lawyer mutters about Vince Foster, a friend of Mrs Clinton's who killed himself in 1993 but whom conspiracy theorists say was murdered.

The Republicans' Mrs Clinton is Mitt Romney, an ex-governor of Massachusetts. He, too, faces a younger, more charismatic threat. Mr Romney gives PowerPoint presentations; Mr Huckabee airs an ad wishing Iowans a merry Christmas.

Mr Huckabee has ethical problems (he accepted a ton of gifts when he was governor of Arkansas), eccentric policies (scrap income taxes, make America self-sufficient in food) and a feeble grasp of world affairs. But his verbal dexterity and years as a Baptist preacher allow him to dodge almost any awkward question with a Biblical allusion. He is joyfully backed by evangelicals and home-schoolers. Eric Woolson, his campaign manager in Iowa, cannot understand why the media harp on about his strong support among those who go to church every week. “Everyone I know goes to church every week,” he says.

A loss in Iowa could cripple Mr Romney, so he is fighting back hard. His television spots accuse Mr Huckabee of being soft on crime (his faith led him to pardon many criminals when he was governor) and illegal immigration. This is risky. Iowans don't like negative campaigning, says Cary Covington, a politics professor at the University of Iowa. Meanwhile, Rudy Giuliani and John McCain, two Republicans with no hope in Iowa but national reputations, are biding their time.

For both parties, a bitter struggle looms. But actual violence has so far been mild. Dan Holman, who follows Mrs Clinton around waving a gruesome anti-abortion banner, was allegedly poked in the ribs with a broom handle by an elderly householder who accused him of standing on his property. But Mr Holman recovered and is still haranguing his nemesis.

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The campaign trail

Primary colour

Dec 19th 2007
From The Economist print edition

Let my people go
"I cannot part the Red Sea, but I believe I can part the red tape."

Mike Huckabee, a Baptist minister, replying to a question on government spending during a Republican presidential debate in Iowa, December 12th

But how do you really feel?
"Oh my God, no. Really?"

A Joe Lieberman staffer upon learning that Mr Lieberman, a Democrat-turned-independent, is endorsing John McCain (a Republican) for president. CNN.com, December 17th

Home wrecker or philanderer?
A poll of women voters revealed that 40% think Judith Giuliani's affair with Rudy Giuliani, while he was still married to his previous wife, makes her less suitable to be first lady. Only a third think Bill Clinton's adultery makes him less suitable to be first laddie.

New York Daily News, December 17th

But on the other hand
"I like the fact that his name is Barack Hussein Obama, and that his father was a Muslim and that his paternal grandmother is a Muslim."

Bob Kerrey after endorsing Hillary Clinton. Washingtonpost.com, December 16th

Never too early to recruit
"Hillary, I'm looking forward to you advising me, as well."

Mr Obama parries when asked about his reliance on former Clinton advisers while promising change during a Democratic candidates' debate in Iowa, December 13th

Republicanphobia
"He seems like a nice charming guy. [Mike Huckabee] doesn't believe in evolution and has some nutty views about what it is we should do about ending violence in our inner city—we should make sure all of our young people are armed. Republicans scare me."

Elizabeth Edwards, John Edwards's wife, revealing her not-so-secret fears in Iowa. ABCNews.com, December 15th

Six-million-dollar man
"Towards the end it was difficult to keep up with all the accounting."

Ron Paul on raising so much money ($6m in one day) he isn't sure how to spend it. CNN.com, December 17th

Just to be on the safe side
"I know you're going to inspect me. You can look inside my mouth if you want."

Mrs Clinton compares a livestock auction to presidential campaigning. Associated Press, December 16th

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Ghost towns

History in a half-brick

Dec 19th 2007 | THURBER, TEXAS
From The Economist print edition

What ruins reveal about America

LINDSAY BAKER walks through the streets of Thurber carrying a hoe. It is handy for killing rattlesnakes, which lurk in the long grass that has all but swallowed the town. He also uses it to scrape in the dirt for what the people who once lived there left behind. He finds some shards of an old medicine bottle, the cap of a salt-shaker and a half-brick with markings that date it sometime between 1904 and 1936. If a brush fire clears the grass, you'll see artefacts like this everywhere, explains Mr Baker, a historian whose boyish enthusiasm for ghost towns belies his years.

America has a lot of ghost towns. There are 1,000 in Texas alone. Thurber was once home to 10,000 people. Now there are only five. In its busy days, Thurber was a coal town. Immigrants flocked there from Italy, Poland and Mexico to dig up fuel for steam trains. The coal was also used to fire bricks made from local clay. The town boasted churches, baseball teams and even an opera house.

But then someone found oil in Texas. Before long, the trains started burning oil instead of coal. Thurber's mine closed in 1926. And since cheap oil prompted Texans to start using asphalt instead of bricks to pave their roads, Thurber's brick kiln closed, too.

The workers left. Their homes were sold for $50 to anyone who could carry them off. You can still see them in the surrounding countryside, serving as barns or storehouses. Little is left in Thurber itself but a smokestack, the graveyard (divided into Catholic, Protestant and black areas) and a few company buildings.

The story is not all wretched, however. Many workers found jobs in the oil business. The company that built Thurber struck oil and prospered. The old boss's daughter-in-law donated money for a museum to preserve Thurber's memory, which Mr Baker runs. His qualifications are ideal: besides teaching industrial history at nearby Tarleton State University, he is the author of “Ghost Towns of Texas” and “More Ghost Towns of Texas”.

Something about ghost towns grips the American imagination. They provide an eerie backdrop for movies, children's books and theme-park rides. Ghost-town enthusiasts devote countless weekends to searching out remote examples, photographing them and posting their findings on websites such as www.ghosttowns.com. Typically, they give imprecise directions so that only the most committed ghost-towners can follow their footsteps.

Ghost towns are sad places, but also monuments to American dynamism. When work moves, so do Americans. With so much space, especially in the West, it can make sense to let a town die. But its memory may live on. Ghost towns give people a tangible connection to a mysterious past, says Mr Baker. Others treat history more playfully. On a hill near Thurber, someone has built a hunting lodge in the shape of a Scottish castle.

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The beer crisis

Trouble brewing

Dec 19th 2007 | ST LOUIS
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A shortage of hops threatens Christmas

JUST as the festive season gets going, drinkers in America are finding their favourite beer suddenly more expensive or even—horrors!—not available at all. Hit by price increases and shortages, many breweries, particularly the small “craft brewers” and the even smaller microbreweries, are being forced to raise prices, make do with modified recipes or shut off the spigots altogether.

The humble hop, the plant that gives beer its distinctive flavour, is the main problem. Many farmers in the Pacific north-west, where America's hop production is concentrated, have turned to more profitable lines—especially corn, which can be made into ethanol. The decrease in hop production, put at some 50% over the past decade, has sent prices through the roof. Brian Owens, the brewmaster of the O'Fallon Brewery near St Louis, Missouri, says that the variety he once bought for $3 a pound (0.45kg) now costs five times that. Many smaller breweries cannot find what they need at any price. Industry giants like Anheuser-Busch and Miller are better off, thanks to long-term contracts. But even Anheuser-Busch has been forced to raise prices for its six-packs.

Without their supply of hops, some smaller producers are going out of business, bringing to a halt the fastest-growing segment of the industry. Other craft brewers and brewpubs are experimenting with new recipes, hoping their customers will adapt.

The hops shortage is only part of the problem. Things are no better for barley, used to make the malt that yeast turns into alcohol. It too has been ploughed under in favour of corn. Crop failures in Australia and Europe, combined with the weak dollar, have made it harder to replace the shortage with imports. Other price increases, of fuel, glass and metal, add to the pressure. Not such a merry Christmas.

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Health

Scalpel, please

Dec 19th 2007 | LOS ANGELES
From The Economist print edition

California enters the fight for universal health care

AFTER almost a year of difficult surgery, during which it occasionally seemed dead, California's health-care reform plan abruptly leapt out of bed on December 17th. Arnold Schwarzenegger, the state's Republican governor, agreed a bill with the Democratic majority in the legislature that would dramatically widen health coverage. There were smiles of relief all round; but the bill's prognosis is bleak.

Like a similar but more modest measure that came into effect in Massachusetts this year, the bill requires almost all Californians to have health insurance, beginning in 2010. It also extends health coverage to the children of illegal immigrants. There will be subsidies for those who earn less than two-and-a-half times the federal poverty level, or $42,925 for a family of three, and tax credits for the more affluent. This will be paid for by a tax on businesses that fail to provide health insurance, a levy on hospitals and yet more taxes for that much put-upon group, smokers.

These levies are not, however, spelled out in the measure that passed this week. Since any bill that included a tax hike would have been blocked by California's ornery Republicans, that part must be approved directly by the voters next November—assuming the bill first clears the state Senate. Opposition, from insurance companies, small businesses and tobacco firms, will be fierce and well-funded.

California's move will affect the presidential campaign. The Democratic candidates Hillary Clinton and John Edwards have proposed similar reforms, which now have a bipartisan stamp (Barack Obama is against forcing people to take out health insurance). Mrs Clinton has already borrowed Mr Schwarzenegger's line that the current system, in which many of the uninsured receive free health care in emergency rooms, is a “hidden tax”.

One problem with the bill is that it assumes health-care costs can be kept in check. That has not been the case so far: between 1960 and 2005 the share of national income gobbled up by health more than tripled. This week the Congressional Budget Office pleaded for a more hard-headed approach to assessing the costs and benefits of new drugs and medical procedures. Britain does that rather well. But Catherine DeAngelis, a physician who edits the *Journal of the American Medical Association*, bristles that this risks turning her profession into a “business”.

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Lexington

The spirit of Christmas

Dec 19th 2007
From The Economist print edition

Americans are in a funk. They should cheer up a bit

Illustration by Kevin Kallaugher

“DUMB and Dumber”, one of the modern classics of American comedy, tells the story of an affable idiot, Lloyd Christmas, who falls in love with a classy beauty, Mary Swanson. In one scene he asks her the chances of “a guy like you and a girl like me” ending up together. The answer is “Not good”. “Not good like one out of a hundred?” asks Lloyd. “More like one out of a million,” Mary replies. Lloyd pauses for a moment, then shoots back, “So you're telling me there's a chance?”

That is the American spirit. Americans have traditionally been much more optimistic than Europeans, and happier too. They believe that people determine their own destinies rather than being the mere playthings of fate. They also believe that their children will have a better life than they do.

This helps to explain the dynamism of the American economy. Americans regard failure—even bankruptcy—as a stone in the road rather than a damning verdict. It also helps to explain the appeal of the American experiment. “The American, by nature, is optimistic,” JFK once said. “He is experimental, an inventor and a builder who builds best when called upon to build greatly.” Europeans ask, “Why?” Americans ask, “Why not?”

But the past five years have produced a dramatic souring in the country's mood. Three-quarters of Americans now think that the country is “on the wrong track”. The number of people who are hostile to trade and immigration has risen sharply, as has the number who think that America should engage less in world affairs. Trust in government is half what it was in 2001. Both the president and Congress have bargain-basement approval ratings. And people are increasingly pessimistic about the future. Barely a third thinks that their children will be better off than they themselves are. The reason why the man with the message of hope, Barack Obama, and the man who hails from Hope, Mike Huckabee, are doing so well is that people think hope is in short supply.

There are good reasons for this pessimism. People are tired of the Bush administration, with its partisanship and incompetence. The Iraq war has shattered America's image of itself as a mighty but good-hearted giant. Iraq means chaos and Abu Ghraib rather than the triumphant export of democracy. The war may be going better of late, but the majority of Americans still think that it was not worth the fighting, and the bad news about the economy is burying the good news about the “surge”. Americans are accustomed to thinking of their houses as pots of gold (and pots of gold that can be remortgaged when you need a bit of extra cash). The gold is now turning into lead.

This is creating a bull market in pessimism. The likes of Bill O'Reilly and Lou Dobbs have transformed themselves into cable stars by ranting about cultural decay and “broken borders”. Patrick Buchanan's latest book is called “Day of Reckoning: How Hubris, Ideology and Greed are Tearing America Apart”. “We are on a path to national suicide,” he says. America is not just “coming apart”, but also “decomposing”.

There is certainly no shortage of bad news. But coming apart? Decomposing? The current issue of *Commentary*—a magazine hardly noted for its sunny disposition—contains an excellent article, “Crime, Drugs, Welfare and Other Good News” by Peter Wehner (a former senior White House aide) and Yuval Levin, which shows why Mr Buchanan is talking through his hat.

Both violent crime and property crime have declined dramatically since 1973. New York City will probably notch up less than 500 murders this year, the lowest since the early 1960s (the figure for 1990 was 2,262). Teenagers are cleaning up their act. Teenage drug use has fallen by 23% overall since the 1990s, and by 50% for LSD and ecstasy. Teens are drinking less, smoking less, having sex less and dropping out of school less. The birth rate for 15-19-year-olds has fallen by 35% since 1991. At 10%, the high-school drop-out rate is at a 30-year low.

Welfare reform is working. The welfare caseload has dropped by 60% since 1994. A series of social evils—overall poverty, child poverty, child hunger—have all decreased. Employment figures for single mothers have surged. The number of abortions fell from over 1.6m in 1990 to fewer than 1.3m this year. The divorce rate is at its lowest level since 1970. Education scores are up.

Things are not all hunky-dory. The violent crime rate has ticked upward in the past couple of years. Illegitimacy is at an all-time high. But this is a very different world from the 1970s, when America's leading cultural indicators all started to point towards Gomorrah. American civil society, aided by sensible social policies, is gradually repairing the damage of the past few decades.

Lighten up, Pat

What about Mr Buchanan's particular bugbear, immigration? For all the passion that this is igniting, America is blessedly free from the alienated immigrant populations that so trouble France and other European countries. America still has a genius for employing and assimilating newcomers. English classes are crammed and English-language tuition is a giant business. And America's ability to suck in and assimilate immigrants is part of a bigger and better story. European economies face profound long-term problems because of their citizens' reluctance to reproduce. Americans have the highest fertility rate of any rich country. That is a long-term vote of confidence in the country's future.

In fact, Americans have always had a vigorous tradition of pessimism, in counterpoint to the optimistic one. In 1819 John Adams worried about the duration of “our vast American Empire”. In 1948 Richard Hofstadter complained that “competition and opportunity” had gone into decline and that Americans were looking “wistfully back toward a golden age”. Much of today's pessimism may prove as unfounded. Americans should rediscover the spirit of Lloyd Christmas, idiot though he was.

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Mexico

Running just to stand still

Dec 19th 2007 | MEXICO CITY
From The Economist print edition

Corbis

How to reform the flawed behemoth that is the world's sixth-biggest oil producer

CANTARELL, in the Gulf of Mexico, was once the world's biggest offshore oilfield, holding over 35 billion barrels of the black stuff. Now, after nearly three decades, it is running out. At its peak in 2004 it produced 2.1m barrels of oil per day (b/d), making up 60% of Mexico's total output. That figure has already fallen by more than 500,000 b/d and could fall by another 200,000 b/d by the spring.

This is a worry for both Mexico and the world. Although Mexico contains less than 1% of the world's proven oil reserves, it is the sixth-largest producer. Its output of 3.1m b/d is well above that of Venezuela or Kuwait. And although oil no longer dominates the Mexican economy—even at recent high prices it provided 16% of exports in 2006, down from 68% in 1982—it lubricates the public finances, contributing nearly 40% of federal revenues.

Since its nationalisation in 1938, Mexican oil has been the preserve of Petróleos Mexicanos, a state monopoly. Pemex resembles a poorly run government ministry. Its past three chief executives have all been accused of corruption (though some of these allegations may stem from bureaucratic infighting). It must comply with onerous procurement rules meant to prevent graft, which in practice are merely a drag on getting things done.

This flawed behemoth is now in “a race against time” to compensate for Cantarell, says Fabio Barbosa, an energy specialist at Mexico's National Autonomous University. It is a race that Pemex seems likely to lose. In a document released in December setting out its strategy for the next five years, the energy ministry forecast that total oil production would decline to 2.5m b/d unless policies were reformed, and would remain roughly constant even if the industry were liberalised.

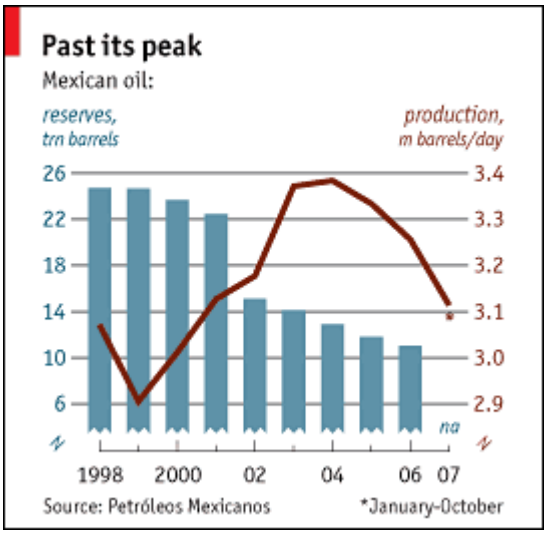
This is partly the result of two wasted decades in which governments have milked Pemex of cash which it might otherwise have invested. That has begun to change: investment in exploration and production doubled between 2000 and 2006 (though much of the increase came through federal debt guarantees to private contractors). Mexico's president, Felipe Calderón, has pushed through a reform of public finances that will cut the royalty Pemex pays from 79 centavos on every peso of oil it extracts to 71.5 centavos by 2012. The company expects its capital spending to rise in 2008 by 20% in real terms.

But this may be too little too late. Mr Barbosa reckons that the density of drilling rigs is 20 times greater in oil-producing parts of the American segment of the Gulf of Mexico than it is in Mexican waters. In particular, Pemex has drilled a mere 20 exploratory wells in water deeper than 300 metres (980 feet). The only result so far is Lakach, a gasfield now moving prematurely towards production after the sinking

of only one exploratory well. The rush stems from an official desire to start deep-water production before the end of Mr Calderón's term in 2012, reckons David Shields, an energy consultant.

Pemex has trouble maintaining its existing installations. A fire at a platform in Cantarell in October killed 21 workers. The firm has also suffered several bombings of pipelines this year by a guerrilla group. Since Mexico has not built a new refinery in 20 years, it has to import 40% of its petrol from the United States. The competition commission says Pemex's 7,500 petrol stations are too few to meet demand.

The obvious solution is to privatise the industry, but that is politically impossible. The state oil monopoly is both popular and constitutionally mandated. So Mr Calderón and other politicians have been searching for ways to loosen the monopoly while respecting the constitution.



The Senate's energy committee is holding a “private, technical debate” on how to do this, according to Rubén Camarillo, a senator from Mr Calderón's centre-right National Action Party. The purpose is to try to reach an all-party consensus by February. So far there is “agreement about what needs to be done, but not how to do it,” says Mr Camarillo.

One step forward would be to grant Pemex control of its own budget. At present some $10 billion a year of this goes back to the federal treasury—on top of Pemex's tax payments. Another proposal would open refining, transport and distribution to private enterprise. This could be done without changing the constitution, since what constitutes “the oil industry” is defined only in ordinary legislation, as César Hernández of CIDAC, a Mexico City think-tank, points out. This was the route taken in the 1990s to allow private investment in electricity generation and the transport of natural gas. Similarly, the ban on risk-sharing contracts in oil exploration is set out only in ordinary law.

But the crux of the problem is how to make Pemex more efficient and open. Five of its 11 board members are appointed by the oil workers' union, a bastion of old-fashioned corporatism. Mr Camarillo reckons that reform could cut Pemex's operating costs by 20%. Others look at the company's overmanning and contract-padding and put the figure higher.

Reaching a political consensus on oil reform eluded Mexico's past two presidents. Sergio Osorio, who advises the centre-left Party of the Democratic Revolution on energy, cautions that if Mr Calderón tries to pass reforms on an issue as sensitive as oil merely by reaching agreement with the centrist Institutional Revolutionary Party (as he did with reforms of pensions and taxes in 2007), he will “put at risk his legitimacy”. Certainly there would be protests. But weighed against declining oil revenues, that is something Mr Calderón may be inclined to risk.

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Cuba

Fidel's last riddle

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The post-Castro era inches closer

“MY fundamental duty is not to cling to public offices, still less to obstruct the advance of younger people, but to contribute experience and ideas.” With these words, read out at his request on state television on December 17th, Fidel Castro hinted that he might step down permanently from his country's presidency. With this Cuba's elderly and convalescent leader seemed to open a public discussion over who might succeed him.

In July 2006 Mr Castro temporarily turned over his powers to his younger brother, Raúl, before undergoing abdominal surgery. Since then Cuba has been edging towards life without the man who has led the country since 1959. Raúl Castro, who heads a collective leadership, has launched an “open debate” on economic reforms. In the medium term these seem certain to involve a greater role for markets and foreign investment in the state-dominated economy.

Doubts over Fidel's role have meant that change has so far proceeded at a glacial pace. Officials say that he has resumed work. This has included occasional meetings with foreign dignitaries and regular newspaper columns on topics ranging from “Bush, hunger and death” to climate change. He is said to keeps tabs on leading officials by telephone.

Fidel was recently nominated as a candidate in an election for the National Assembly due on January 20th. In March the president will be chosen for a five-year term from among the assembly's members. Despite popular discontent over shortages, low wages and corruption, there has been no sign of any significant challenge to Communist Party rule.

The next three months will thus reveal Cuba's immediate political future. Some believe that Raúl, who is himself 76, does not want the presidency, and that the job may go to Carlos Lage, the de facto prime minister, who oversaw liberalising economic reforms during the 1990s (some of them since reversed). If that has already been decided, more reforms may even be unveiled before the election.

But, as so often, Fidel seems to want to keep Cubans guessing. He closed his televised message with a reference to Oscar Niemeyer, a Brazilian architect who turned 100 on December 15th and who is still working. “One has to be constant to the end,” Fidel wrote approvingly. But perhaps constancy need not involve active political leadership.

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Brazil

The cheque bounces

Dec 19th 2007 | SÃO PAULO
From The Economist print edition

A setback for Lula and new uncertainty for public finances

IT IS an odd conjunction. The government struggles to get much done. But the president, Luiz Inácio Lula da Silva, floats above other politicians on a cloud of his own popularity. On December 13th he suffered the biggest defeat of his second term, when the Senate rejected the renewal of the CPMF, a tax on financial transactions. On the same day, Ibope, a pollster, suggested that 65% of Brazilians approve of their president.

What explains this mixture of popularity and impotence? First, it is rare for any president to enjoy a majority in the Senate. He must use patronage to build coalitions and involve himself in negotiations with the opposition. Lula does neither of these things particularly well. His government has given too many jobs to Lula's own Workers' Party and to its biggest coalition partner, the PMDB, a blancmange of a party whose guiding philosophy is to wobble in the direction of power and then demand rewards for its support.

Second, an expanding economy has kept tax revenues buoyant, making arguing for more taxes tricky. In a last-minute bid to save the CPMF, Lula announced that all the 40 billion reais ($22 billion) the new tax would raise would be spent on health care. Earlier, the government said it was essential to pay for *bolsa família*, a large-scale anti-poverty scheme. The opposition reckoned the tax would allow the government to splurge before municipal elections next year.

The loss of the CPMF is a setback but not a disaster for the government. It can probably plug the gap through clever accounting and rises in other taxes. It could even trim a bloated bureaucracy. But the overall fiscal deficit runs close to 2% of GDP. Traders in the financial markets reckon that the Senate's blow to the public finances will discourage the ratings agencies from elevating Brazil's debt to investment grade. Lula was more serene. When his finance minister suggested that a new tax would be needed to replace the missing revenue, Lula told him to stop worrying and calm down.

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Thailand's election

South-East Asia's Pakistan?

Dec 19th 2007 | UBON RATCHATHANI
From The Economist print edition

Thailand is on the election trail and heading towards uncertainty

Reuters

“WE'RE not selling fish sauce, this is an election rally,” jokes Sombat Ratano as he walks alongside his campaign truck with a microphone, hailing the voters of a rural village in Ubon Ratchathani province. In Isaan, Thailand's poor and populous north-east region, support is still strong for Thaksin Shinawatra, the prime minister deposed by a military coup in September 2006. Mr Sombat is a candidate in the December 23rd general election. He is standing for the People's Power Party (PPP), a reincarnation of Mr Thaksin's Thai Rak Thai (TRT), which was disbanded after the coup. As he tours the village, he drops Mr Thaksin's name at every opportunity, promising to revive the policies—from cheap health care to farming loans—that made the former prime minister popular.

Pakistan is not the only Asian country where a dodgy military regime is running a general election under dubious electoral rules in the hope of keeping out a similarly dodgy civilian whom it overthrew. The difference is that unlike Benazir Bhutto in Pakistan, the exiled Mr Thaksin is not being allowed to take part in the vote himself, and there may be slightly more hope that things will come out right in the end.

Middle-class Bangkokians, who are as snooty about their country cousins as any metropolitan elite anywhere, often say that “uneducated” rural voters such as those in Isaan were bribed and tricked into voting for Mr Thaksin. But rural voters were quite rational in handing him landslide victories in 2001 and 2005. He was Thailand's first party leader to promise and deliver a comprehensive set of policies aimed at the mass of voters. The allegations of corruption, conflicts of interest and vote-buying that surround him are serious but hardly unusual: such practices are endemic in Thai politics.

The gravest allegation against Mr Thaksin is that in a “war on drugs” in 2003 he seemed to be encouraging extra-judicial killings of suspected drug-dealers by police. An investigation into this, started after the coup, remains incomplete—perhaps because the policy, however brutal, was also popular. Amid signs of resurgent amphetamine abuse, the PPP unashamedly talks of reviving it.

On his shirt Mr Sombat bears the logo of King Bhumibol's 80th birthday celebrations, held earlier in December. This is a subtle riposte to the military junta's accusation that Mr Thaksin and his party do not respect the country's revered monarch, whose portrait is as omnipresent in the Isaan countryside as it is around Bangkok's royal palaces. The PPP has also hired Samak Sundaravej, an arch-royalist, as stand-in leader while Mr Thaksin remains abroad. Though close to the palace, Mr Samak is a foe of General Prem Tinsulanonda, the king's chief adviser and, Thaksinites allege, mastermind of the coup.

Many parties, old and new, are contesting the election. Some have brought military men on board, hoping for army backing. Niran Pitakwatchara, a local doctor standing in Ubon Ratchathani for

Matchimathipataya, one of the new parties, reckons voters have started to see the flaws in Mr Thaksin's policies. But all the other parties, including Mr Niran's, have adopted copycat versions of them—making them awkward to attack.

The generals who staged the coup claimed to be saving Thai democracy from Mr Thaksin's abuses. Their dictatorship has been a pretty mild one and they are keeping their promise to hold the election by the end of 2007. But they presumably hoped the former leader would be forgotten by now. He has not been. Though Thailand's quirky opinion polls must be treated with caution, most predict that the PPP will win comfortably more seats than its nearest rival, the Democrats, although not a majority. The widespread assumption is that the Democrats will nevertheless form a ramshackle coalition. The problem is that Abhisit Vejjajiva, the Democrats' leader, though young and handsome, may not command enough respect to lead a fractious government.

Until the coup, Thailand seemed to be escaping its historic cycle of alternating military dictatorships and weak civilian rule. By the late 1990s it had become a beacon of multi-party democracy in Asia. Whether that beacon will shine again is unclear. If a Democrat-led coalition takes office, the PPP seems likely to make its life difficult and short-lived. If the PPP leads the next government, a peace pact with the generals is possible but the military men are bound to be nervous. The PPP promises to rescind a political ban that a tribunal created by the junta imposed on Mr Thaksin and 110 allies. If he returns, he would be able to scrap the amnesty that the coupmakers granted themselves—and put them in the dock.

General Anupong Paojinda, a new army chief who took over in October, insists there will be no coup even if the Thaksinites win. Then again, General Sonthi Boonyaratglin, his predecessor, repeatedly made the same promise right up to the moment he overthrew Mr Thaksin.

The generals, courtiers and bureaucrats who have been in charge for the past 15 months have ruled dismally. Thailand's economy is now one of the slowest-growing in booming Asia. The army-appointed interim government has become ever more invisible as its popularity has sunk. General Sonthi, presumably fearing humiliation, quietly dropped plans to stand in the election. But it is unclear whether the army and its civilian backers have learned the old lesson that coups and extra-constitutional excursions tend to make political crises worse and do not produce good government.

Thailand's judicial and regulatory institutions are on trial in the election. For example, a new Election Commission, appointed with little dissent in the turmoil shortly before the coup, faces accusations of partiality. It absolved the military junta of plotting to subvert the election by undermining the PPP, despite the discovery of army documents detailing the plot. But the commission is now threatening to disqualify the PPP over the less serious matter of a video clip in which Mr Thaksin breaches his ban on politicking and urges support for his party.

The commission and courts will have lots of complaints to handle after the polls close. If they enforce the rules impartially and promptly, they could set Thailand back on the road to democracy. If they are arbitrary, biased or dilatory, they may doom it to more years of instability—especially if they leave the impression that the people have voted for Thaksinism, only to have their will subverted.

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Recalculating China's GDP

Clipping the dragon's wings

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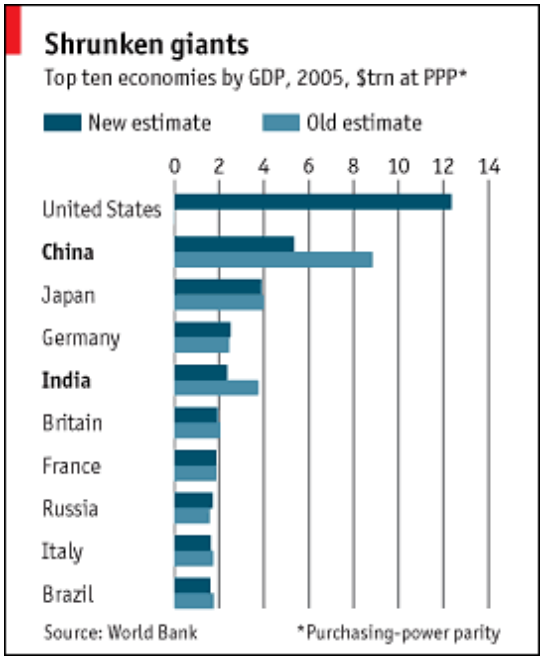
China's economy is smaller than was thought

AMERICANS may well be delighted by new figures that show China's GDP is 40% smaller than previously thought. Has the devious Beijing government been massaging the numbers, as communist planners are wont to do? Hardly. China's GDP in yuan terms remains unchanged. What has happened is that the World Bank has changed the calculations it uses to make international comparisons of the size of economies.

Converting a poor country's GDP into dollars at market exchange rates can understate the true size because a dollar buys much more in an emerging market such as China than it does in America. The IMF and the World Bank therefore prefer to convert GDPs into dollars using purchasing-power parities (or PPPs), which take account of price differences between countries.



Previous estimates of China's PPP were largely guesswork. Now the World Bank has produced new calculations based on a survey of prices of over 1,000 goods and services in 146 countries, including China for the first time. On this basis, China's GDP in 2005 was $5.3 trillion, compared with $2.2 trillion using market exchange rates and $8.9 trillion using previous PPP estimates. This was still well below America's $12.4 trillion that year (see chart).

But this does not mean China's economic miracle has been just a statistical artefact. The revisions do not reduce China's growth rate—the fastest over 30 years of any large country in history. It remains the world's largest producer and consumer of steel, the second-biggest user of energy and even on revised figures the world's second-largest economy. In 2008 it is almost certain to overtake Germany as the world's largest exporter, and assuming recent rates of growth are sustained, within ten years it will overtake America (in PPP terms) as the world's largest economy.

China itself has always played down the PPP numbers, hoping to portray itself as a poor country so America will give it more leeway when arguing about exchange rates and trade. China's policymakers will not be unhappy with their new, slimline figure. Indians, in contrast, love to boast that their GDP overtook Japan's in 2006 to become the world's third-biggest. Unfortunately, this is no longer true: its GDP has also been slashed by almost 40%.

With Brazil's GDP also down a bit, the share of emerging economies in world output (including Asia's newly industrialising economies) has been cut to 46% in 2005, compared with over 50% on the old numbers. Their economic dominance has merely been postponed.

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Death by overwork in Japan

Jobs for life

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Japanese employees are working themselves to death

HARA-KIRI is a uniquely Japanese form of suicide. Its corporate equivalent is *karoshi*, “death by overwork”. Since this was legally recognised as a cause of death in the 1980s, the number of cases submitted to the government for the designation has soared; so has the number of court cases that result when the government refuses an application. In 1988 only about 4% of applications were successful. By 2005 that share had risen to 40%. If a death is judged *karoshi*, surviving family members may receive compensation of around $20,000 a year from the government and sometimes up to $1m from the company in damages. For deaths not designated *karoshi* the family gets next to nothing.

Now a recent court ruling has put companies under pressure to change their ways. On November 30th the Nagoya District Court accepted Hiroko Uchino's claim that her husband, Kenichi, a third-generation Toyota employee, was a victim of *karoshi* when he died in 2002 at the age of 30. He collapsed at 4am at work, having put in more than 80 hours of overtime each month for six months before his death. “The moment when I am happiest is when I can sleep,” Mr Uchino told his wife the week of his death. He left two children, aged one and three.

As a manager of quality control, Mr Uchino was constantly training workers, attending meetings and writing reports when not on the production line. Toyota treated almost all that time as voluntary and unpaid. So did the Toyota Labour Standards Inspection Office, part of the labour ministry. But the court ruled that the long hours were an integral part of his job. On December 14th the government decided not to appeal against the verdict.

The ruling is important because it may increase the pressure on companies to treat “free overtime” (work that an employee is obliged to perform but not paid for) as paid work. That would send shockwaves through corporate Japan, where long, long hours are the norm.

Official figures say that the Japanese work about 1,780 hours a year, slightly less than Americans (1,800 hours a year), though more than Germans (1,440). But the statistics are misleading because they do not count “free overtime”. Other tallies show that one in three men aged 30 to 40 works over 60 hours a week. Half say they get no overtime. Factory workers arrive early and stay late, without pay. Training at weekends may be uncompensated.

During the past 20 years of economic doldrums, many companies have replaced full-time workers with part-time ones. Regular staff who remain benefit from lifetime employment but feel obliged to work extra hours lest their positions be made temporary. Cultural factors reinforce these trends. Hard work is respected as the cornerstone of Japan's post-war economic miracle. The value of self-sacrifice puts the benefit of the group above that of the individual.

Toyota, which is challenging GM as the world's largest carmaker, is often praised for the efficiency and flexibility of its workforce. Ms Uchino has a different view. “It is because so many people work free overtime that Toyota reaps profits,” she says. “I hope some of those profits can be brought back to help the employees and their families. That would make Toyota a true global leader.” The company is promising to prevent *karoshi* in future.

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Myanmar

Burmese maze

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From The Economist print edition

For Muslims and other minorities, the monks' battle was not their fight

Get article background

IN THE streets surrounding the Sule Paya pagoda in downtown Yangon, Burmese Muslims ply their trade, selling sweetmeats, calligraphy or spectacles. When the military junta opened fire on protesters led by monks in September, the Muslims had an excellent view of the violence. But for all the expletives they threw at the government, many refrained from joining the protesters. “It's a Burmese problem,” says a grizzled old man, lolling outside the mosque opposite the pagoda. “Let them deal with it. They don't think of us as being of their country.” The sense of being apart from Myanmar is an example of the religious and ethnic divisions that will persist, even if military rule eventually gives way to democracy.

The complexities of national identity are starkest in Sittwe, the capital of Rakhine (formerly Arakan) state in western Myanmar, bordering Bangladesh. Sittwe's Muslims, who form anywhere from a third to half of the local population (official estimates of Muslim numbers are notoriously unreliable), are a mixed lot. Some claim descent from Indian and Bengali immigrants, who arrived in the once-thriving port when Burma was still a place where fortunes could be made. Others belong to the Rakhine ethnic group. Still others claim a distinct Rohingya ethnicity (a designation the junta does not recognise). But on one point, all agree: the government, being Buddhist, discriminates against Muslims. “The infidels are cruel to us and beat us,” goes a common refrain.

Severe poverty—the sight of ten people living under a single roof without electricity is as common as that of forced labour on the roads along the marshy sea—exacerbates Muslim resentment, particularly given the false but intractable belief that Myanmar's Buddhists are getting rich. Although incidents of outright violence have decreased, relations between Muslims and Buddhists remain tense. Some Muslims take satisfaction from the government's crackdown on the monks. “They [the junta] put them on a pedestal and now they're the ones having a problem,” grins one local imam. Amongst Sittwe's Muslims, the otherwise universal admiration for Aung San Suu Kyi, the leader of the opposition, is tempered. “She can't help being an improvement on the current government,” says the imam. “But she's Buddhist too. She's probably not very good on the Muslim question.”

Religion is not the only source of division. Race plays a powerful role. Sittwe's Muslims, like its rarer Hindus, find it almost impossible to travel outside Rakhine state. Even inside it, paperwork and perpetual inspections can make a simple fishing trip harrowing. Most attribute these restrictions to the government's belief that Rakhine is plagued by illegal immigrants from India and Bangladesh who do not deserve citizenship or the right to travel.

Such oversimplifications miss the demographic complexities of Sittwe. Some residents are Indians who were born there. Others are products of mixed marriages. Many have family members in other parts of Myanmar whom they might never see again. “There have been Muslims here since before the British ever came to Burma,” says a local teacher. “And yes, a lot of the people here did come over from Bangladesh. But that was years and years ago.” Small wonder that most of Sittwe's people nowadays just want to leave. “I'd go to Malaysia or even Bangladesh,” says a young man who was born of a Bengali father and Rakhine mother. “But I don't have the money.”

Though it is most potent amongst Muslims, the idea of not belonging is common among other ethnic and religious minorities. Sittwe's Hindus also say they are locked out of the labour market. Buddhists in Rakhine often identify themselves as belonging “Not [to] Myanmar, but the Arakan kings” (a reference to the ancient Rakhine empire). Forging a single national identity from these disparate ethnic and religious groups will be a challenge for any Burmese government. Already, disunity may have harmed the prospects for democratic change. “Where were the ethnic armies?” asked one resident of Yangon, plaintively, of the uprising against the junta in September. “If the Shan and Kachin had come, we might have got somewhere.” Perhaps, like the Rakhine and Muslims, they felt it was not their fight.

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Kenya's election

Down to the wire

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Jobs and corruption are the issues in a close-fought contest to be president

Reuters

EVEN by the colourful standards of African politicians, Raila Odinga stands out. The son of Kenya's first vice-president, Oginga Odinga, Mr Odinga was educated in East Germany and spent six years in solitary confinement for his alleged involvement in a 1982 coup that failed to topple the president of the day, Daniel arap Moi. Later, Mr Odinga was rehabilitated. Enriched by his family's molasses business, he helped to defeat Mr Moi in the presidential election of 2002, this time by throwing his support behind a coalition led by Mwai Kibaki. Now he is campaigning to topple Mr Kibaki and become president himself in the election due on December 27th. And because the mirror of Kenyan politics reverses everything sooner or later, the retired Mr Moi is backing Mr Kibaki.

Mr Odinga wants to build more roads and modernise Kenya's railways. He calls the failure to add an inch of track to the railway system since independence from Britain in 1963, “a strong statement about the mediocrity with which this country has been run”. He is also keen on devolution. A recent visit to Wales convinced him that a Welsh-style assembly would work for Kenya's regions. As an ethnic Luo, Mr Odinga is proud of his friendship with Barack Obama, an American presidential candidate whose father was also Luo.

Still, Mr Odinga makes many queasy. Bankers fret about his Marxist youth. Foreign diplomats suspect him of authoritarian tendencies. For better or worse, a victory for this ebullient German-speaker would certainly upset the cosy country-club politics that have characterised Kenya since independence. Although he is rich, he remains an outsider.

Mr Kibaki, by contrast, is an insider. A minister since 1965, he has a reputation for good manners. He enjoys playing golf and reads P.G. Wodehouse novels. Despite these gentle pursuits, his health is a worry. Some say he is unable to work hard; he occasionally nods off while conducting important government business. He rejected a call by Mr Odinga for a televised presidential debate. That said, he has performed gamely on the campaign trail. He opposes devolution. He has the solid backing of the Catholic church and of Kenya's business class. Under his presidency, the country is better educated, less authoritarian, more prosperous and better connected to the world (notably China) than it has ever been.

On December 18th, in the last test of opinion before the election, Steadman, a local polling firm, put Mr Odinga at 45%, against 43% for Mr Kibaki and 10% for Kalonzo Musyoka, a former foreign minister and born-again Christian who has designs on winning a future presidential election. If those numbers hold, Mr Odinga's Orange Democratic Movement should also do well in the parliamentary elections, ahead of Mr Kibaki's umbrella Party of National Unity. A further threat to Mr Kibaki is that he may not achieve the

mandatory 25% in five of the country's eight provinces, which would disqualify him. He is already known to be doing badly in Western, Coast and North-Eastern provinces, where he is having to do more campaigning than he wants.

If Mr Kibaki does lose, it will be because he has not created enough jobs. Despite an overvalued Kenyan shilling, tourism and agriculture are booming. The economy is growing at about 6% a year, a record. But Mr Kibaki has not fulfilled his dream of turning Kenya into an industrialised country.

He may also be punished for his failure to tackle egregious corruption, a central pledge from his 2002 victory. His own appointee in charge of ethics in the government, John Githongo, was bullied into exile after uncovering massive fraud within the government. Mr Githongo says that the president first ignored and then “flat-out opposed me”. Under intense pressure from donors Mr Kibaki removed two ministers accused of corruption, only to reappoint them a few months later. But there is little expectation that Mr Odinga would do much better in this respect. Only Mr Musyoka has set a leader's example by making his assets and income public.

In many ways, the young hold the key. Mr Odinga has a massive lead among twenty-somethings. If they bother to vote, change is certain. The integrity of the voting process will be tested to breaking point. Screaming mobs, mostly of jobless young men, will surely use any irregularities to make trouble. Kenyans hope that a fiercely fought election will forge a truer democracy, not cause more bloodshed.

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South Africa

Zuma comes out on top

Dec 19th 2007 | POLOKWANE
From The Economist print edition

With rancorous debate, the ANC elects a new leader

Get article background

AFP

AFTER months of acrimony, the African National Congress (ANC) has elected Jacob Zuma to be its new leader. In a ballot of almost 4,000 delegates at the national conference of South Africa's ruling party in the small town of Polokwane, Mr Zuma defeated the incumbent, Thabo Mbeki, by a wider margin than some had predicted; 2,329 votes to 1,505. Mr Zuma, formerly the party's deputy leader, is now in prime position (though not certain) to succeed Mr Mbeki as the country's next president. Mr Mbeki, who has served two terms, has to step down as head of state in 2009.

For a party renowned for its iron discipline, the scenes in the tents at Polokwane were unprecedented. Mosiuoa Lekota, the ANC's chairman and a supporter of Mr Mbeki, was booed and heckled from a boisterous floor. True to his style, Mr Mbeki delivered a dreary, technocratic speech that lasted for over two hours, listing the socio-economic achievements of the past decade. He ended by lamenting the increasing patronage, corruption and unprincipled politicking within the party—a thinly veiled swipe at his rival—and called for moral regeneration. But Mr Zuma's supporters broke out in songs supporting their hero as soon as Mr Mbeki had finished his address. They insisted on a manual counting of the votes, for fear that the Mbeki camp would rig the result.

Mr Mbeki tried to rebut accusations that he does not tolerate dissent and has centralised power. But he failed to convince the party's rank and file, who strongly favour the more congenial Mr Zuma. For the first time in decades, the party's local branches were genuinely able to choose their leader; in the past he would have been selected by the party's top brass. A delegate from the Eastern Cape, Mr Mbeki's homeland, argued that change was needed. She complained that public services were still dismal in the rural part of the province where she lives. Another delegate, from the Free State, argued that Mr Mbeki—who has been at the helm of the party for almost a decade—had been in charge for too long already.

Yet despite this victory, Mr Zuma is by no means assured of the national presidency in 2009. For a start, his past could return to haunt him. He was acquitted of rape last year, but the National Prosecuting Authority, after years of investigation, could well charge him for corruption again. His supporters dismiss his legal problems as a political conspiracy, but Mr Zuma would have to resign if convicted. In that case, Kgalema Motlanthe, the party's secretary-general, who has been elected as the party's number two, would take over.

Whatever happens, the relationship between the government, dominated by Mr Mbeki's faithful, and an ANC led by Mr Zuma will be awkward. The next few months could see either a patching-up of the rift over the succession or a purge inside the party of Mbeki loyalists. There are even questions over whether Mr Mbeki will finish his full term as the country's president, although Mr Zuma has said that he sees no reason for his early departure.

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Iran and the Arabs

Friendlier hands across the Gulf

Dec 19th 2007 | CAIRO
From The Economist print edition

Old suspicions and new links

RELATIONS between Iran's Shia revolutionaries and the rich, Sunni-dominated, American-protected Arabian monarchies of the Persian Gulf have never been easy. After America's invasion of Iraq in 2003, and Iran's election of the fire-breathing Mahmoud Ahmadinejad as president in 2005, they grew markedly worse. Arab fears of Iran's regional ambitions, its influence over Shia minorities and its nuclear programme have lately been matched by Iranian worries about the loyalty of its own Arabs and the possibility of an attack launched from the American bases that speckle the opposite shore.

But recent events signal a possible change. On the same day on which a new American National Intelligence Estimate overturned previous assertions that Iran is actively pursuing nuclear weapons, President Ahmadinejad made a first-ever appearance as a guest at the annual summit of the Gulf Co-operation Council (GCC), a body created in 1981 largely with the goal of containing revolutionary Iran. Soon after the summit meeting, Saudi Arabia, the biggest by far of the GCC's six member states and long the most hostile to Iran, invited Mr Ahmadinejad to take part in the annual *haj* pilgrimage to Mecca. Another Arab heavyweight, Egypt, has also joined the charm offensive, sending its first high-level delegation to Iran in several years.

Cross-Gulf suspicions, however, have not suddenly evaporated. Like many Western governments, the Gulf monarchies remain concerned that Iran's nuclear programme is oddly shaped for civilian-only purposes (see article). Arab leaders continue to charge Iran with a host of misdemeanours, ranging from alleged meddling in Iraq, Lebanon and Palestine to occupying a trio of mid-Gulf islands claimed by the United Arab Emirates (UAE). Mr Ahmadinejad's proposal, at the summit, to pursue a regional security pact “without foreign influence” was viewed sceptically, as merely a way for Iran to replace America as the Gulf's guardian.

Still, there is relief over the lessening of tensions. However much they dislike Iran's mullahs, Gulf Arabs dislike more the idea of getting caught up in a war between Iran and America. In recent months they have not been especially happy with their erstwhile American ally, despite the Bush administration's belated effort to address Arab concerns over Palestine and to disentangle itself from Iraq. Earlier this year, for instance, the parliament of Bahrain, an island state that hosts America's Fifth Fleet, passed a non-binding motion banning the use of its territory for any attack on Iran.

Economic considerations are also playing their part. Cross-Gulf trade is growing fast. Bahrain itself recently signed a deal to import Iranian natural gas. And this link pales by comparison with the

flourishing trade between Iran and Dubai, the most mercantile of the seven emirates that make up the UAE.

Partly because of sanctions, and partly because of the restrictive business environment in Iran, tiny Dubai has become a vital lifeline for its vast neighbour. As many as 400,000 Iranian expatriates now live in the UAE, with nearly 9,000 part-Iranian-owned firms registered with the Dubai Chamber of Commerce and Industry. Iran is the main destination for exports from Dubai, with much of the volume hauled by the scores of picturesque dhows that line the city-state's Creek. The Iranian leadership likes to paint this relationship as one that benefits Gulf Arabs more than itself. But with its own inefficient economy foundering, and with the GCC countries jointly wielding hundreds of billions of dollars in investment capital, it is the Arabs who now carry greater clout.

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Yossi Beilin

A dove departs

Dec 19th 2007 | JERUSALEM
From The Economist print edition

A politician who paid the price for telling Israelis unpalatable truths

ABROAD he has a reputation as a tireless peacemaker; at home he is a byword for political failure. When Yossi Beilin announced his decision to step down as head of the left-liberal Meretz party at its next leadership election in the spring, there were palpable sighs of relief not just from his rivals but also from his friends, who hope that he still has a chance to be remembered for his bold statesmanship instead of his defective leadership.

Mr Beilin was one of the first mainstream Israeli politicians to push for what most Israelis now accept: the need to give the Palestinians an independent state. And it was largely thanks to him that serious peace talks first got going. In the early 1990s, when Israel was talking to local Palestinian leaders in an attempt to circumvent the exiled Yasser Arafat and his Palestine Liberation Organisation in Tunis, Mr Beilin argued as a youthful deputy foreign minister that without Arafat, whom most Israelis dismissed as an incorrigible terrorist, peace talks would be worthless. With the backing of Shimon Peres, he encouraged the secret meetings in Oslo between an Arafat aide and two Israeli peace activists that led eventually to the famous handshake between Arafat and Yitzhak Rabin on the White House lawn.

He stuck to his views even as the peace process collapsed, the violent second *intifada* erupted and the international “road map” that followed it began to stall, arguing to the last that Arafat was the only Palestinian leader who had the standing to make peace. In 2003 he and a Palestinian counterpart launched another peace plan, the Geneva Accord, which, even with the *intifada* raging, won the support of some 30% of Israelis. According to Dov Weisglass, an adviser to Ariel Sharon, the popularity of this unofficial “civil society” initiative was one factor that prompted the then prime minister to ignore the rage of his own Likud party and extract Israel's soldiers and settlers from Gaza in 2005.

Lately Mr Beilin has courted unpopularity by speaking reluctantly of the need for Israel to do business, through a third party, with the rejectionists of Hamas now that they have deposed Arafat's old Fatah movement and control the Gaza Strip. His daring has long hurt his political career. When Palestinian suicide-bombings disheartened Israel's peace camp he lost his relevance to Labour, left to head Meretz, and ran it into the ground. His own defence, that other parties had appropriated Meretz's peace agenda, is only partly true; he neglected its other core issues such as social justice and civil rights. An allegedly dictatorial management style did not help.

By contrast, Mr Peres, who had shifted from a hawk in his early days to a dove by the time Mr Beilin worked for him, shifted effortlessly back to the political centre and is now Israel's president. There is no question who has been the cannier politician. But Mr Beilin has been perhaps Israel's boldest peacenik. He will be missed, if his departure from the arena is permanent.

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Turkey and Iraq

Raids across the border

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Was there a deal between Turkey and America?

AS IF Iraq did not have enough problems of its own. On December 16th Turkish aircraft bombed what they said were Kurdish rebel positions deep inside northern Iraq. It was one of the biggest cross-border air strikes in recent years and was followed by an incursion by about 300 Turkish troops. They were said to be lightly armed, and advanced only 3km (1.9 miles) into Iraq. But the two actions mark a big escalation of the traditional hostilities.

The Turks' targets were Kurdish fighters of the Kurdistan Workers' Party (PKK), who have used bases inside the semi-autonomous Kurdish enclave in northern Iraq to launch raids into Turkey. Although Iraq's American occupiers have worked hard in recent months to prevent such a raid, Turkey's most senior general said that the Americans had not only agreed to the air strikes but had also provided the necessary intelligence.

If this is true, it may be the result of a delicate balancing act. The Kurdish enclave in the north is the most successful part of post-Saddam Iraq. The Americans do not want it to be destabilised. But they also want to salvage relations with Turkey, a vital NATO ally whose people have become strongly anti-American since America invaded Iraq in 2003.

Many Iraqi Kurds do not believe Turkey's claim that it is motivated only by the raids of PKK fighters. They fear that Turkey's real aim is to prevent the Kurdish areas of Iraq from gaining full independence, which would stoke up an appetite for secession among Turkey's own Kurdish population. The head of Iraq's Kurdish regional government refused to meet the visiting American secretary of state, Condoleezza Rice, as “a sign of protest” against American acceptance of the Turkish raids.

It may well be that America and Turkey have struck a deal. In exchange for American support for the limited Turkish raids, and a promise to order the Iraqi Kurds to take action against the PKK, Turkey's prime minister, Recep Tayyip Erdogan, is thought to have made his own promises to George Bush. These include recognising the Kurds' regional government in Iraq and introducing a more liberal amnesty for PKK fighters.

A previous amnesty that pardoned only those who ratted on their comrades failed. Now the government may pardon all PKK fighters who have not been involved in violence. After more than two decades of war against the rebels, Turkey knows that military measures alone cannot fix its Kurdish problem.

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The German economy

The beguiling path of non-reform

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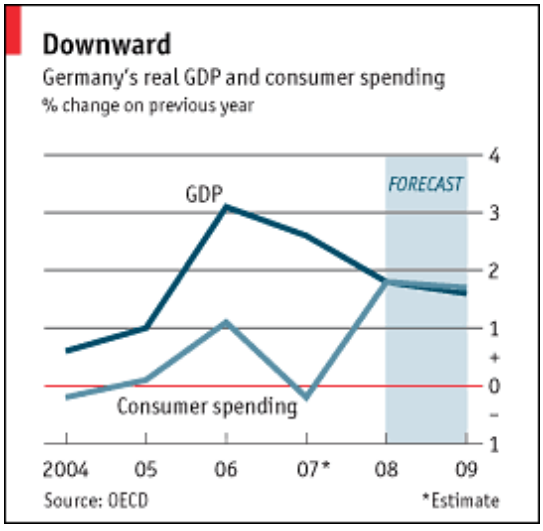
The economy is likely to slow sharply next year, but that may not be enough to revive the cause of reform

Illustration by Peter Schrank

GERMANY had no property bubble. Its workers have long settled for modest pay rises. Its businesses and its consumers have been prudent about debt. Recent governments have endured political pain to enact growth-boosting reforms. Yet none of these things will spare Europe's largest economy from the turbulence beyond its borders. In a global slowdown, Germany's three-year-old economic recovery is likely to continue, but at a slower pace. In a way this is a pity, for only the prospect of more serious meltdown could goad Germany's political leaders to make further reforms.

At first sight Germany looks well placed to cope with adversity. It is one of few countries to "reindustrialise", notes Bert Rürup, head of a committee of economists who advise the government. This is largely built on its prowess as an exporter, especially of capital goods. Less than 9% of Germany's exports go to the United States, so its direct exposure to an American slowdown is modest. Buyers of German machines are less sensitive to price than, say, consumers of Italian clothes, offering some protection against a strong euro. The credit crunch begun by the American subprime-mortgage mess will rattle Mediterranean companies more than German ones, which finance themselves mainly out of profits. "The private sector is not overstretched at all," says Dirk Schumacher of Goldman Sachs.

Even so, German growth is expected to sag, from about 2.6% this year to 2% or less in 2008 (see chart). And that actually overstates the economy's strength. The 2008 forecast is boosted by an overhang from this year's strong growth and by some extra working days (February 29th, for example). Without these props, growth might be just 1.1%, says the Kiel Institute for the World Economy. In 2009 it may bounce back, but only to 1.8%. Export growth is likely to fall from 8% in 2007 to 5.6% in 2008 and 4.8% in 2009, predicts the Ifo research institute in Munich. Investment growth will weaken, largely because a corporate-tax law taking effect on January 1st will stop businesses from writing off factories and equipment so rapidly.



Fortunately 2008 is supposed to be the year of the consumer. In 2007 shoppers were sideswiped by a sharp increase in value-added tax and by jumps in food and energy prices. In November annual inflation hit a 14-year high of 3.1%. But in the meantime

job creation, plus a pick-up in pay, have put extra cash into consumers' pockets. In 2008 they should begin to spend it. The risk that they will not, along with the possibility of a serious American slump, are the main threats to the economy next year. After a slow start, Christmas shopping has met “merchants' high expectations”, reports the German Retail Association.

In the longer run German growth prospects will depend more on politicians' progress with reforms than on the whims of consumers. Since 2003 political leaders have helped, first under Gerhard Schröder, a Social Democratic chancellor, and now under his Christian Democratic successor, Angela Merkel, who leads a “grand coalition” with the Social Democrats as junior partners. Labour-market reforms have added a fifth of a percentage point to German growth potential, mainly by drawing unskilled and older workers back into employment, reckons the Bundesbank. The government has restrained overall spending but is starting to raise investment, a further boost to growth.

Lately, however, Germany's leaders seem to have lost their nerve. Reforms have met popular hostility not applause; voters seem to crave economic justice more than growth. Fewer people now describe their situation as “good” or “very good” than did five years ago, when the economy was in worse shape, according to a survey by Allensbach, a pollster. More than half the population thinks that economic conditions are “unjust”. This mood unnerves both main parties in the grand coalition. Each hopes to govern without the other after the next election in 2009. The Social Democrats, the original authors of Germany's reforms, are panicked by the rise of the anti-reform Left party. And Ms Merkel is positioning her Christian Democrats as the party of “the middle”, which means sticking with reforms only if the political price is not too high.

And so the coalition has started to whittle away at Germany's growth prospects. In November it decided to extend the duration of unemployment benefits paid to older workers, which will encourage employers to dismiss more during the next downswing. Then it agreed to introduce a minimum wage in the postal industry, upsetting competitors' plans to challenge Deutsche Post when its monopoly of letter delivery expires on January 1st. On their own such retreats will cause minor economic damage, but Alfred Boss of the Kiel Institute worries that “steps in the wrong direction will multiply” in the next few months. There is talk of extending the minimum wage and of tightening the regulation of temporary work, which accounts for much recent job creation.

The upswing has increased the government's revenues and so the temptation to spend. Already it has chopped the payroll tax that finances unemployment insurance, which should encourage employment but may erase the federal labour agency's surplus in the next downturn. The government wants to spend more on children and vocational training, but may not be ready to make offsetting cuts, for instance in subsidies to farming or the railways, to pay for them. Its plan to balance the budget by 2011, which once looked easy, may be in danger, fears Mr Boss.

Hans-Werner Sinn, Ifo's president, thinks this is a counterattack against globalisation that could last for decades. He sees the creeping introduction of a minimum wage as a “fundamental change” in Germany's liberal tradition of letting markets set prices and dealing with inequality through taxes and spending. That may prove too pessimistic. So far, the reversals championed by the Social Democrats seem to be aimed at gaining big political payoffs at low economic costs. Still, driving in reverse makes it harder to bring in further reforms of health care, labour markets or the welfare state. There is little prospect of daring moves until after the 2009 election. And even then, it may take another bout of economic pain to make anything happen.

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Ukraine's government

Return of the orange princess

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Yulia Tymoshenko wins a second chance

IT WAS a telling contrast. Just one day after President Vladimir Putin more or less appointed himself Russia's next prime minister, the Rada (parliament) in Kiev chose in a free vote to make Yulia Tymoshenko Ukraine's prime minister. It also exposed the fallacy that post-Soviet Slav countries cannot be democratic.

Ukraine has been cited by the Kremlin as an example of democratic turbulence to be avoided. Russian television has gloated over Ukraine's chaotic politics, pointing up the advantages of Russia's stable system, in which decisions are taken by the Kremlin and rubber-stamped by the Duma. Ukraine's politics have been messy ever since the orange revolution of late 2004, when Viktor Yushchenko became president.

AFP

Yes, I have my majority—at last

Yet for all the disillusion in the orange camp, Ukrainians gave it one more chance in the parliamentary election on September 30th. Ms Tymoshenko's party did well, taking votes from the Party of the Regions led by Viktor Yanukovich, the outgoing prime minister. With the pro-Yushchenko Our Ukraine block, Ms Tymoshenko had enough seats to push out the Party of the Regions. But it took two months for her to form a coalition. Nerves were further frayed on December 11th, when the electronic voting system failed to register two votes for Ms Tymoshenko. But on December 18th the parliament at last backed Ms Tymoshenko, by a one-vote margin.

The good news is that Ukraine has proved itself to be a genuine democracy, with a fierce competition for power and now a functioning opposition. As one Russian oligarch notes, Ukrainian politicians have tried it all to win power: election-rigging in 2004, money to bribe politicians to switch sides in 2005-06 and now democracy.

Ms Tymoshenko and Mr Yushchenko have been here before. He made her prime minister in early 2005, only to fire her months later. She blames her failure on the fact that she did not have her own team and was undermined by Mr Yushchenko's friends. Now she is in a stronger position and has already shaped her own cabinet. She promises judicial and economic reform, more open government and an end to murky intermediaries in the gas trade with Russia. But some pledges may be impossible to deliver.

Her first challenge is to keep the orange coalition together. The Our Ukraine block consists of ten parties. Some of Mr Yushchenko's supporters cannot stand Ms Tymoshenko. Mr Yushchenko may feel justifiably threatened by her as a potential presidential candidate in 2009. But to be credible, Ms Tymoshenko must tame her populist instincts. In a presidential election she will be judged on her record as prime minister. If the orange coalition fails to modernise and reform Ukraine, it would betray those who three years ago helped stage the orange revolution in the snow of Kiev. It would also set a bad example for other ex-Soviet republics—and give even more cause for Russian gleefulness.

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Poland's new foreign policy

A winter honeymoon

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A lesson in how to make friends and influence people

UNTIL the change of government this autumn, it would have been unimaginable: a Polish prime minister paying a friendly call on the German chancellor, Angela Merkel, and speaking to her not only in her own language, but even using the intimate *Du* form. After months in the diplomatic deep freeze, Polish foreign policy has thawed. The biggest change has come with Germany, which brokered Poland's entry into the European Union and ought to be its strongest ally. Ms Merkel has known Poland's prime minister, Donald Tusk, for years. At their recent meeting the two leaders eased most of the tensions that were to the fore under Mr Tusk's predecessor, Jaroslaw Kaczynski.

The substantive issues are unchanged. Germany wants to build a centre to mark the fate of millions deported after the war from historically German lands in eastern Europe. Many of their old homes are in Poland. But rather than volubly objecting to the plan, which is backed by a vocal émigré lobby in Germany, Mr Tusk blandly defused the row. “There should be no taboo subjects. We are friends, and friends can't get themselves into a situation of not talking to one another,” he insisted. Poland is hoping for German support for its own historical project, a second world war museum in Gdansk. The new Polish foreign minister, Radek Sikorski, also favours a museum of totalitarianism in Brussels, to put the monstrous regimes of the 20th century on the equal footing that many in eastern Europe believe is right.

Germany is going ahead with a pipeline to bring gas directly from Russia under the Baltic Sea, bypassing eastern Europe. Poland has voiced objections to this in the past, though Mr Sikorski now insists that he never likened it directly to the Molotov-Ribbentrop pact, a comparison the Germans find both hysterical and offensive. Poland plans its own gas pipeline, from Norway via Denmark. Germany may support it and repeat its offer of a share for Poland in the Russo-German project.

To its east, Poland is being a lot nicer to the Kremlin. It has dropped the previous government's objection to Russia's bid to join the OECD, a rich-country club. That opposition attracted no support from other countries, who prefer to bog Russia down in detailed scrutiny of its compliance with OECD rules on corruption, protectionism, statistics and money-laundering. In return, Russia has dropped its long-standing ban on Polish meat exports.

Yet the timing of the Polish move was odd. It came in the run-up to the controversial parliamentary election in Russia, at a point when a leading Kremlin critic, Garry Kasparov, had just been jailed. Some top Poles agree that this was regrettable. Mr Sikorski has had a friendly meeting with his Russian counterpart, Sergei Lavrov, in which they agreed to revive a commission to look at “difficult issues”. That contrasts with the previous government's fondness for searching out the thorniest bits of history and raising them as acerbically and often as it could.

All this should go down well elsewhere. “Poland will be a great asset; before, she was a liability,” beams one European diplomat. The neighbourhood offers much scope for constructive diplomacy. The Polish government has paid for a leading ex-dissident, Adam Michnik, to go to Georgia to advise the government on how best to restore media freedom. But the ties to watch may be with another big neighbour, Sweden, whose foreign minister, the tough-talking and wily Carl Bildt, is on the lookout for heavyweight allies. Poland—the biggest of the EU's new members—could prove to be just that.

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Turkey and its Christians

The cross and the crescent

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Why Christians feel under threat in today's Turkey

AFP

THIS has been a bad year for Orhan Ant. As a Protestant missionary in Samsun, on the Black Sea, he has had death threats and his church has been repeatedly stoned. Local newspapers called him a foreign agent. A group of youths tried to kidnap him as he was driving home. His pleas for police protection have gone unheeded.

Mr Ant is not alone. All over Turkey, Christians are under attack. In January Hrant Dink, an ethnic Armenian newspaper editor, was shot dead in Istanbul by a teenager who said he had “insulted Turkishness”. In April two Turks and a German, all evangelists, were murdered in Malatya. Their killers bound and tortured them before slitting their throats. In December an Italian Catholic priest was knifed by a teenager in Izmir. Another Italian priest was shot dead in Trabzon in 2006.

Many blame the attacks on a new ultra-nationalism, tinged with Islamic militancy, that has swept across Turkey. Unemployed teenagers in the Black Sea region seem especially prone to it. “The plight of Christians is critical,” says Husnu Ondul, president of the Ankara-based Turkish Human Rights Association. Like many others, he believes that the “deep state”, comprising a few judges, army officers and security officials who need enemies to justify their grip on power, is behind the attacks.

That may seem far-fetched. Yet evidence leaked to the media in the Dink and Malatya cases points to collusion between the perpetrators and rogue elements in the police and the army. It also suggests that the Istanbul police were tipped off about Mr Dink's murder a year before it was carried out. “So why did the Istanbul police do nothing to prevent it?” wonders Ergin Cinmen, a lawyer for the Dink family.

Respecting the religious freedom of non-Muslims is essential to Turkey's hopes of joining the European Union. Laws against Christians repairing their churches have been relaxed. Overriding objections from pious constituents, the ruling Justice and Development (AK) party has just restored an ancient Armenian church in eastern Turkey. School textbooks are being purged of an anti-Western bias.

Yet many Christian grievances remain. The prime minister, Recep Tayyip Erdogan, resists calls to reopen the Greek Orthodox Halki seminary on Heybeli island off Istanbul, shut down in 1971. Turkey refuses to recognise the ecumenical title of the Greek Orthodox patriarch, Bartholomew I, the spiritual leader of over 200m Orthodox Christians. The patriarch, a loyal Turkish citizen, has lobbied hard for Turkey's EU membership. But this has only reinforced suspicions among ultra-nationalist detractors, who accuse him of trying to “Christianise” Turkey and wanting a Vatican-style state in the heart of Istanbul.

Never mind that the Greek Orthodox church in Istanbul has dwindled to 4,000 souls, many of them too old to follow their children abroad. Nor that the patriarch must under Turkish law be a Turkish citizen, a rule which is making it difficult to find a successor to Bartholomew I. “They [ie, the Turks] apparently won't regard the conquest of Constantinople as complete until the patriarchate ceases to exist and all Christians have been frightened away,” suggests one restorer of icons in Istanbul.

The government has yet to approve a draft bill to help non-Muslims recover thousands of properties that have been confiscated by the state and either sold or left to decay. The Aya Yorgi church in Istanbul's Edirnekapi district, which was badly damaged in an earthquake, is one sad example. Its walls are cracked, its roof is leaking; a marble angel lies in pieces on the floor. “All we ask is to be permitted to rescue our church, but we cannot hammer a single nail,” complains Bishop Dionysios, a Greek Orthodox prelate who still conducts services there.

Many Christians concede that AK has treated them better than its secular predecessors did. They blame

the deep state for their recent troubles. But the excuse of the deep state's power is wearing thin after AK's big victory in July's general election. “With such a strong mandate, the government's failure to meet our demands can only mean one thing, that the deep state is still in charge,” says a Christian priest. Or perhaps that AK believes in religious freedom for Muslims, but not Christians.

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Charlemagne

A summit to nowhere

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What the Lisbon and Brussels summits say about today's Europe

Illustration by Peter Schrank

IN THESE carbon-conscious times, there was much carping because European Union leaders held a party in Portugal to sign their new treaty, only to fly 1,700km (1,060 miles) to Brussels for a formal summit the next day. This jet-setting was indeed wasteful, and not only in the obvious way. The Lisbon bash on December 13th was both interesting and revealing; it was the summit in Brussels that was dull and largely devoid of substance.

Lisbon's revelations included the fact that EU leaders are unsure how to treat their union's almost-anthem, the “Ode to Joy”. This bit of Beethoven's ninth symphony was given formal status in the defunct EU constitution only to be ditched, along with the flag and the motto, when the text was reworked into a “reform treaty”. In Lisbon it took a moment for people to recognise the Beethoven being thumped out on a piano. But as a choir began singing the “Ode to Joy”, most jumped to their feet (the Austrian chancellor, Alfred Gusenbauer, showily singing along).

It took an instant longer for some, including Britain's foreign secretary, David Miliband, to stand. History can only guess what his boss, Gordon Brown, would have done had he made it to the ceremony. Alas, Britain's prime minister arrived in Lisbon hours late, after a wholly unconvincing diary clash. As a man unimpressed by Euro-flummery, he signed the treaty alone at a vast desk, as if acting out “splendid isolation” in a diplomatic game of charades. It is revealing that his doing so caused a fuss. Within the EU, Mr Brown's semi-absence from the stage is now presented as a problem, unbalancing the triangle of the union's heavyweights, France, Germany and Britain.

In Brussels, there is much talk of the awful personal chemistry between Germany's chancellor, Angela Merkel, and France's president, Nicolas Sarkozy, even if the machinery of Franco-German co-operation remains. It would be hard to find two more different personalities, suggests one senior figure. Ms Merkel is a calm scientist, attentive to detail. Mr Sarkozy is “excitable”, and a “pure political animal”. One European minister says simply: “A lot of European politics at the moment is about Sarkozy management. You have all this policy coming out in spasms, the idea is to limit the collateral damage.”

European leaders agreed to two things in Brussels. The first was to send 1,800 policemen, judges and officials to Kosovo. This matters, but not as much as it sounds. The mission was agreed only in principle and its legal basis remains unclear. The second was to create a “reflection group”, which has until June 2010 to think about the challenges facing the EU between 2020 and 2030. In case that pace seems too breakneck, the group (chaired by a former Spanish prime minister, Felipe González, with help from a former Latvian president, Vaira Vike-Freiberga, and from Jorma Ollila, a Finnish businessman who chairs both Nokia and Royal Dutch Shell) has until the second half of next year merely to choose its nine members. That was about it, even though the summit conclusions ramble on for many pages—talking of

the “crucial role” of tourism, asking for a “strategy for the Baltic Sea region”. The summit lasted less than a day, stunning veterans used to coffee-fuelled marathons lasting 36 hours or more.

Boosters talk up the Lisbon treaty as relaunching the EU after its constitutional crisis. Judging by the summit's mood it is more like a coalition government that has only just survived a vote of no confidence in parliament: everyone is weary and wary of fresh divisions, at least until the treaty is safely ratified. The next big Euro-row (about allocating targets for cuts in carbon emissions) cannot start until next year, when a proposal will be made by the European Commission. Subjects that might have triggered squabbles at this summit were mostly dealt with beforehand: a funding dispute about Galileo, a planned European satellite-navigation system to rival America's GPS; another spat about Turkey's membership negotiations.

The limits to Europe

Many December summits have featured rows about enlargement. There could have been an especially nasty one this time: Mr Sarkozy's hostility to Turkish accession is visceral. Indeed, it is the reason for the new reflection group. In August Mr Sarkozy made clear that France would block any more talks with Turkey unless a group of “sages” was invited to ponder the future. Such groups are not actually meant to reflect; they usually act as stalking horses for factions pushing big innovations, such as the single currency. So Mr Sarkozy's colleagues assumed that he wanted the reflection group to define Europe's future borders (and to discover that Turkey lies beyond them).

Several governments, backed by the commission, accordingly fought to give the group a less alarming brief. Its mandate now makes no mention of borders, and it explicitly rules out discussion of the next EU budget or further changes to institutions. But efforts to defang the beast did not quite succeed: language about studying the stability of the EU and “the wider region” will surely allow the group to discuss enlargement.

Fizzing with excitement, Mr Sarkozy insisted that the group would “certainly” ask whether the EU needed frontiers, to determine whether political union was part of a “new European dream”. Yet in a next-door room Mr Brown offered a wholly different vision: the group would discuss “economic, environmental and security challenges” and globalisation. Indeed, Mr Brown's mood visibly lifted as he talked of the “exciting” prospect of more EU co-operation with such bodies as the IMF. And when he got to the Bank of International Settlements, he became positively cheerful.

The conclusion is clear. EU leaders disagree profoundly about what Europe is: a political project, or just an exercise in international economic governance. A summit that debated these differences would be worth holding. But this summit was not. A more rational EU would have simply scrapped it.

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Northern Rock

Slouching towards nationalisation

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A private rescue of the stricken bank looks ever more remote

Landov

THE first rule of being in a hole is the simplest: stop digging. Yet it is the hardest to follow. Ever since the government decided in September to bail out Northern Rock, a British mortgage lender that had run out of ready cash, it has been delving ever deeper. A line of credit intended to tide the bank over for a few months ballooned so hugely that the Bank of England is now owed around £25 billion ($50 billion). And, after guaranteeing deposits in order to stop the first bank run in Britain since 1866, Alistair Darling, the chancellor of the exchequer, has since been forced to guarantee more and more of its debts.

On December 18th the government moved closer towards what is, in effect, the nationalisation of Northern Rock when it extended its guarantee to cover almost all the bank's wholesale debts. What this means is that the Treasury is now directly guaranteeing about a third of the mortgage lender's liabilities, which are a bit over £100 billion. That is on top of the £25 billion loan from the Bank of England. In all, the government's commitment to the bank has now reached the stomach-churning figure of over £55 billion.

The support for Northern Rock is far larger than any likely call on taxpayers' money, which would result from losses at the bank. But the question that matters is whether the government's strategy has become broken-backed. Mr Darling may hope that he is buying time until a private buyer can be found to take it off taxpayers' hands. But that hope is looking less and less realistic as money markets remain dislocated and fearful.

Wishful thinking

Indeed, the bank run that began in mid-September has not yet been halted. The haemorrhage of retail deposits has slowed. Between £5m and £10m is understood to be flowing out of customer accounts each day, compared with more than £200m on some days in November. However, the wholesale depositors and money-market participants on which Northern Rock relies for most of its funding have remained fickle. Without the new guarantee, billions of pounds might have been pulled out of the bank in the closing days of 2007.

Attempts to sell Northern Rock are looking less and less feasible, since they require a hefty refinancing

operation from banks that are in no mood to take on risky business. Although two bidders have emerged—Richard Branson's Virgin Group and Olivant, headed by Luqman Arnold who once ran Abbey National, a large British mortgage lender—neither has managed to borrow the £10 billion-15 billion they would need to start repaying the Bank of England's loan. Nor, it seems, have they come up with viable plans to repay the rest of the money before 2010. One proposal apparently rests on the astonishing assumption that Northern Rock would be able to win a 25% share of British retail deposits over the next three years.

On December 14th the Treasury asked Goldman Sachs, an investment bank, to see if it could line up a group of banks willing to finance the stricken mortgage lender. Few hold out much faith that it can succeed where others have failed. Some of the leading investment bankers in London, from firms including Citigroup, Merrill Lynch and Blackstone, have done little else for the past three months.

All hopes for a sale of Northern Rock now rest on two conditions, both of which seem unlikely. The first is a quick thawing in credit markets early in 2008 that would allow buyers to finance their bids. That looks optimistic, despite central-bank intervention to bring down elevated interbank interest rates.

The second—that Northern Rock's shareholders agree to a deal that dilutes their stake in the bank—also looks improbable. SRM, a hedge fund, has recently increased its stake in Northern Rock to almost 10% and is understood to be keen to buy even more. It is calling for a shareholders' meeting (which may be announced early in 2008) and has also threatened to block any deal which it feels undervalues the bank. It knows well that the government can do little to coerce shareholders into accepting a sale of Northern Rock short of threatening to nationalise the bank or cutting off its funding, in which case it would go bust, an unattractive political choice.

SRM's grandstanding strengthens the case for proposals by Mervyn King, the governor of the Bank of England, to remedy the absurd situation Britain finds itself in: it is the only country in the G7 without a special mechanism for dealing with distressed banks. In addition to a new system of deposit insurance, Mr King wants an agency that could take control of struggling lenders to protect deposits and then sell their assets.

Such proposals suggest that the right lessons are now being learned from Northern Rock; they need to be introduced without delay. Yet the most pressing priority is to sort out the mess at the mortgage lender. The least undesirable way to deal with it may now be to take the bank into public ownership, in order to remove the veto of shareholders. That need not involve a long-term commitment, if buyers can be found for the bank's book. Mr Darling may still be striving to avoid nationalisation, but his quest looks ever more forlorn.

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The Liberal Democrats

The third man

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How far can Nick Clegg take the party he now leads?

EPA

Nick's close shave

IF INDIFFERENCE is crueller than mockery, the Liberal Democrats, who elected a new leader, Nick Clegg, on December 18th, must be piqued. The nation hardly noticed the contest between the 40-year-old former home affairs spokesman and Chris Huhne, who held the environment brief, to replace Sir Menzies Campbell, who resigned in October. Even a tight finish (the winning margin was 511 votes out of 41,465 cast) was not enough to lend the announcement a sense of import.

Yet the Lib Dems are an important party. They won 22% of votes cast in the 2005 general election, and have not slipped below 16% in any election since 1992. Britain's first-past-the-post electoral system gives them only 62 of Parliament's 646 MPs (hence their enthusiasm for proportional voting models), but that tally still represents a post-war peak for a third party at Westminster.

The Lib Dems' ability to command such support partly explains why no party may be able to get an overall parliamentary majority at the next election. John Curtice, a psephologist at Strathclyde University, reckons that, all else being equal, a 20% share of the vote for the Liberal Democrats would leave the Tories needing to win by more than 9% to govern alone.

But the Lib Dems have struggled recently, falling to 12% in the polls under Sir Menzies. The plunge was attributed to his lacklustre leadership (he looked older than his 66 years), as well as strong performances first from Labour, after Gordon Brown took over in June, and then from the Conservatives after the prime minister ducked calling a general election. Coming just a year-and-a-half after their previous leadership contest—prompted by the resignation of Charles Kennedy over confessed drink problems—Sir Menzies's departure made the Lib Dems look divided and inconsequential.

Yet there are signs of recovery in the polls, for which Mr Clegg can thank not only the government's woes but also Vince Cable, the treasury spokesman who served as an interim leader. Aged 64, he did not take part in the contest, but his intellect and wit—he mocked the transformation of Mr Brown “from Stalin to Mr Bean”—have made many wish he had.

Confidence in Mr Clegg's ability to build on Mr Cable's stewardship has cooled. His campaign did not show the vigour needed to win media coverage for a third party. But he has youth and charisma on his side. That he embodies his party's classical liberal wing—rather than the social-democratic one that Mr Huhne pitched to—will also help in the many constituencies it is defending from the Tories.

If a hung parliament does materialise, the Lib Dems could be king-makers—entering a coalition government with either of the main parties. The Tories already appear to be courting them. On December 15th David Cameron, the Conservative leader, invited them to co-operate with his party on decentralisation. For Mr Cameron to be wooing a party unpopular with his own suggests he knows how limited his options may be after the next election.

The Lib Dems, though, are rarely smug about the pivotal role they could play at that point. And with reason: they have reached nothing approaching a consensus on which of the two main parties they would prefer as partners, or whether coalition would be acceptable at all. The party's activists are to the left of its leadership and would struggle to accept a deal with the Tories. Yet propping up a tired Labour government they regard as indifferent to civil liberties and the environment would be scarcely more palatable.

Burdens as well as opportunities, then, for Mr Clegg. The attention his victory received was modest; the

influence he may come to wield is anything but.

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The British army

Beating the retreat

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British troops look for a face-saving way out of Iraq

AFP

Ready or not, they are in charge

"I HATE Iraq. I wish we had never gone to the place," said Winston Churchill in 1926 when, as chancellor of the exchequer, he had to pay the cost of holding on to the violently rebellious territory. The British government, and much of the public, no doubt feels the same about today's military venture in Iraq, which has cost around £5 billion ($10 billion) and the lives of more than 170 soldiers since 2003.

Having entered the country uninvited, the army is leaving unlamented. The handover ceremony in the departure lounge of Basra airport (Britain's last base) on December 16th, when Basra province was transferred to Iraqi security control, summed it up: the British are no longer safe in the city, and have booked their tickets out of the country.

It was very different in the early days of the occupation of southern Iraq when British soldiers patrolled in soft berets, in contrast with the Americans in Baghdad. But as Iraq's violence spread southwards, and Basra turned into an urban shooting gallery, British troops also had to don their helmets and drive in armoured vehicles.

Their battle now is to try to avoid the perception of defeat. Commanders claim that security has improved enough in Basra for Iraqi forces to take charge. Attacks against British forces have declined, but that is largely because of a shortage of targets after British troops withdrew from the city centre to the airport in September. A six-month ceasefire declared by Muqtada al-Sadr, the powerful radical cleric, has helped to reduce violence.

For Iraqis, though, Basra remains a violent place, with scores of people killed every month. Major-General Jalil Khalaf, the police chief, complained of being left in a sea of troubles. Rival Shia militias with murky links to Iran compete violently for control and terrorise the population—particularly women deemed immodest, barbers and those selling alcohol.

For the moment there are no open battles. That is good enough for Britain to accelerate its withdrawal, drawing the number of troops down from 4,500 to 2,500 next spring. A recent report from MPs asked whether such a small contingent could do anything more than defend itself. All British troops, except special forces and aircraft supporting the Americans, will probably be out of Iraq by the end of 2008.

The British army's ability to wage irregular warfare has been found wanting, despite the folk memory of centuries of colonial policing and decades in Northern Ireland. It would be a mistake, some generals say, for commanders to believe the convenient fiction of their success and assume they have nothing to learn.

Confronted with rising violence, the Americans adopted a new counter-insurgency doctrine and reinforced their forces. American units now deploy for 15 months, compared with six months for the British. Conditions in Basra and Baghdad are different, say British officials. But the more important difference may be the mindsets in London and Washington; the British accepted that events were beyond their control, whereas the Americans acted to regain the initiative.

The Pentagon is worried about the prospect of a vacuum in southern Iraq, through which its supply convoys from Kuwait must pass. However, the gap between the allies may narrow as America's "surge" in Iraq ebbs away. American commanders may also declare victory and withdraw, at least from some outlying provinces.

Britain's departure is hardly graceful, but it would come as little surprise to Churchill. It was he, after all, who said that staying in Iraq was like “living on an ungrateful volcano”.

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Missing data

Learning the embarrassing way

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Why the government keeps on losing records

FOR many years Britain's tiny band of civil libertarians have been trying to alert their countrymen to the danger of proliferating government databases, which allow bureaucrats to share citizens' information among themselves with the minimum of fuss. A string of recent blunders have made their case more powerfully than years of lobbying. The latest to emerge has been the loss earlier this year of 3m driving-test records held at a data centre in Iowa.

That unwelcome disclosure was made on December 17th, just after Alistair Darling, the chancellor of the exchequer, had published a preliminary report into a much bigger mistake. A month earlier, in a charged parliamentary session, a shaken Mr Darling revealed that the Treasury's tax agency, HMRC, had managed to lose two CDs containing the records of 25m child-benefit claimants in the post. The information included names, dates of birth and bank-account details—everything an identity thief needs—and is reckoned to be the world's second-biggest data blunder.

Mr Darling portrayed the loss as an unfortunate lapse by a junior official that breached security guidelines. But in the weeks since the revelation that has become a harder line to sell. After the loss of the discs HMRC sent out a letter of apology to everyone affected. But in its haste the tax authority made another mistake: the letters, many of which will have missed their intended recipients, contained much more personal information than was necessary to apologise. Tax officials have admitted that data have disappeared from their offices on eight occasions since 2005. A separate internal review of HMRC, also published on December 17th, made what amounts to scathing criticisms of the agency's management, albeit couched in bland official-speak.

Other government departments have had their embarrassments, too. A technical glitch allowed online visa applicants to see their fellow applicants' details; a similar error allowed job-seeking junior doctors to read their rivals' applications as well as their own. The catalogue of mishaps has spurred ministers to promise reforms, including compulsory encryption, simpler management at HMRC and tougher penalties for those who break the law in the most egregious ways.

Tougher sanctions may help, but much of the battle will be cultural. Richard Thomas, the information commissioner, told a parliamentary committee earlier in December that the weight of bad publicity was at last having an effect, and that data rules were starting to be followed more scrupulously. Not everyone agrees. “Not many people, and not many organisations, take data protection fabulously seriously,” says James Mitchell, a data-protection lawyer. Part of the reason, he says, is weak penalties under British laws.

Others see a more fundamental problem. The Foundation for Information Policy Research points out that data losses are an inevitable consequence of the government's determination to build massive databases to keep tabs on its citizens. And despite the embarrassments of the past few weeks, it shows no sign of abandoning the biggest project of all: its plan to introduce identity cards for everyone.

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Bagehot

The tipping points

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After a tumultuous year, there may be a decisive shift in British politics in 2008

Illustration by Steve OBrien

IN SOME parts of the world iconic statues are toppled, barricades erected or the bodies of autocrats strung up in piazzas. In British politics, “tipping points”—moments when an outbreak of sentiment becomes an epidemic, a trend becomes destiny and a leader's fate is sealed—tend to be visible only at a distance. That, of course, does not stop people spotting them immediately.

In the last few months of 2007, much of the political class has confidently predicted the end of Labour's long imperium—though there is disagreement over which of the superabundant governmental calamities represented the decisive moment. The run on Northern Rock? The “bottled” non-election? The weird funding scandal (unlikely, since most people already assume that politicians are more crooked than they actually are)? Or “Discgate”, about which senior Conservatives are so cock-a-hoop that they jokingly offered to pay for the letters sent to the 7m families whose details were lost in the post?

In fact, British politics may well have tipped in 2007. But in hindsight it may turn out to have done so in a different, subtler, perhaps more important way.

For future historians, the year's most salient event will probably be neither the bounce and fall of Gordon Brown, nor the summer fall and autumnal second coming of David Cameron, the Tory leader. It will be the descent of the final curtain (aeons ago, it already seems) on the great actor-prime minister, Tony Blair. One of Mr Blair's legacies, energetically embraced by Mr Cameron, is a politics of emulation, in which the distinction between the two big parties is more thespian and less ideological than it was before he commandeered the Labour Party. In this Mr Blair was himself responding to more fundamental shifts in British society: the decline of the old industrial economy, the spread and sharpening of aspiration, and the resulting obsolescence of political competition based on class interests.

The flip side of Mr Blair's electoral success—two landslide victories and one limping, post-Iraq win—is the waning of traditional party allegiances. For Mr Brown, Mr Cameron and future Tory and Labour leaders, that means the old blocks of voters that their parties have been able to rely on (roughly a third of the country in both cases) are shrinking. The prejudices that once inhibited voters from switching directly between the main parties are evaporating too. Moreover, voters are not only more floaty than they once were: there are also fewer of them. British politicians—like those in other advanced democracies—face the awkward dual challenges of fickleness and indifference. Sceptical of the impact that mere national government has on their lives, growing minorities are declining to vote altogether (though the French election suggests that some contests are galvanising enough to arrest that trend); other voters are

deserting mainstream parties for single-issue alternatives.

The real import of the past year's political volatility may lie not in who is up and down at the end of it, but in the volatility itself. The polls, which now show the Tories sailing above 40%—closing on the numbers they need to win an outright majority at the next election—have been too erratic to foretell the outcome reliably; earlier in 2007 they seemed to presage a hung parliament, and then the final extinction of Conservatism. Instead they may suggest that the year of Mr Blair's exit marked the start of a new epoch of fluid, yo-yoing, 21st-century politics.

So the answer to the parlour-game question, about which of Mr Brown's 2007 mishaps was decisive, is: none of them. Still, for all the fluidity, that more parochial tipping point—the one that seals Mr Brown's fate—may come during 2008.

Even in a newly unstable political era, there will be times when reputations dip too low to be recovered, or when a party's momentum becomes, in the short term, almost impossible to stop. Mr Brown may well wait as long as he can, until 2010, to go to the country; but it is nevertheless likely that 2008 will reveal whether his current slump is remediable (as slumps can be), and whether Mr Cameron's own bounce is to flatten (like those of other recent Tory leaders).

An Englishman's home, a Scotsman's fate

The impact made by Nick Clegg, the newly anointed energetic leader of the Liberal Democrats, will affect both men's prospects. So will three other, related variables. The first and most straightforward is geographic. To win an election, the Tories need to start doing better in some suburban bits of the Midlands, Yorkshire and Lancashire that embraced Margaret Thatcher but that Mr Cameron has so far failed to seduce. The worry for him is that the tactics and pledges that have strengthened Tory support in the south-east will flop, or even backfire, farther north.

The second factor is atmospheric. At the moment many voters are looking resentfully at Labour's record in office through the refractive lens of recent debacles. Will that distaste harden into a settled conviction that Mr Brown's number is up? Government is in part the business of losing friends and disappointing people, and by the end of 2008 it may be clear whether Labour has simply lost and disappointed too many to win a fourth term. Mr Cameron, meanwhile, needs to allay residual fears about his callowness, and doubts about the personality of his party.

The third factor, stupid, is the economy. There are a lot of crazily leveraged homeowners in Britain; if the economic slowdown and the credit crunch make their mortgages a lot tougher to service, Mr Brown may be tipped vertiginously towards eventual defeat. Until a few months ago, he could feasibly have hoped that economic troubles could be politically useful to him, with his undeniable experience and reputed competence. Not any more. The long-term prospects of all three parties depend on how they adapt to the new, fragmented, fickle politics. But in 2008, old-fashioned concerns may predominate.

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The World Bank

First the mutiny, then the silver

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AP

An impressive bounty for the new skipper of a troubled ship

WHEN sailors turn on their captain, it often ends badly—in shipwreck or retribution. But the World Bank, whose staff rose up against their leader in the spring, has just hauled in some treasure.

On December 14th, after nine months' haggling, it convinced 45 countries—including unlikely benefactors such as China, Egypt and Latvia—to give it over $25 billion, to be bestowed on the world's poorest states during the next three years.

That is 42% more than the bank drummed up the last time round, and comes on top of $6.3 billion to compensate it for the loan repayments it lost as a result of debt relief. At a time when the IMF, a sister institution, faces big job cuts, this infusion of funds was a triumph for multilateralism. It was also a victory for the bank's new president, Robert Zoellick (pictured above), who replaced Paul Wolfowitz in July. A confident technocrat, he has reassured Europeans who were unnerved by his neoconservative predecessor's political baggage and lack of direction. Germany, one of the leaders of the spring putsch, stumped up $2.2 billion, and Britain, which pledged $4.3 billion, became the bank's biggest single donor.

Mr Zoellick had raised the ante in this funding round by contributing $3.5 billion to the pot from other bits of the bank's empire. Rather than relending that money to middle-income countries or investing it in the private sector, Mr Zoellick chose to spend it in countries whose annual income per head is less than $1,065.

In some ways, the bank's prospects may have benefited from tumult at the top. Europe's policymakers worked hard to oust Mr Wolfowitz. Why bother, if they were not ready to back his replacement?

Still, Mr Zoellick's pitch in the beg-a-thon differed little from his predecessor's: the bank mobilises common funds for common aims, as Mr Wolfowitz put it. In a world of more than 280 donors (from the Desert Locust Control Organisation for Eastern Africa to the International Potato Centre), international aid is a fragmented business, putting it mildly. The bank says it can hold it all together.

For example, on December 13th the bank approved a project to lay and repair rural roads and bridges in Afghanistan, which often succumb to snow, rain or landslides. Afghan reconstruction is supported by a multilateral fund, administered by the bank. All neat and tidy. But funds for road-building also arrive from the Europeans, the Japanese, the Americans, the British and even the UN's Counternarcotics Trust Fund. The road project's prospectus bemoans the “large numbers of donors and NGOs chasing projects and government attention”.

Too true. Tanzania got 542 donor visits in 2005; Vietnam had 791, more than two a day. By pouring money through a shared conduit like the bank, donors make fewer demands on weak local bureaucracies. The OECD, a rich-country club, says the bank is less of a nuisance than some donors: less prone to split aid into tiny projects, or to bypass a government's own budgetary systems.

The bank calls itself a common “platform” from which others can operate. But such modesty conflicts, at times, with a need to find and advertise success stories. One such tale is a project in India's Karnataka state, which has helped farmers to make dams, collect rain and protect soil from monsoons. The bank says these efforts have raised crop yields by 24% and household incomes by two-thirds; they have also yielded some nice images of sapling mango trees and flowering jasmine.

But the bank is still struggling to gauge the real impact of its work. It can say it built or repaired over 22,000 classrooms in the 12 months to June, but it can't tell how much children are learning. So the bank wants to improve its own indicators: the Afghan project, for example, will judge its success by whether the price of commodities in village markets falls to within 15% of town prices. But the bank's recent woes have slowed the drive for closer self-scrutiny—a need that may well grow as it is called on to oversee projects that are supposed to conserve carbon (see article).

The bank is happy when cash flows smoothly from taxpayers, through its coffers, to the governments and projects it supports. But sometimes development is better served by restraint than by largesse. Free money can stifle a country's own tax-raising efforts—and private enterprise. It can also underwrite misgovernment and malfeasance. The bank's staff and shareholders balked when Mr Wolfowitz shifted course to focus more on corruption. After that experience, will their new helmsman ever dare to rock the boat?

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Climate change and forests

So hard to see the wood for the trees

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Good news, but no certainty of salvation, for forests and their friends

Get article background

IF THE Bali conference on climate change brought good news to anyone, it must surely be the inhabitants of the rainforests and others committed to preserving those trees. But their reactions have been mixed, ranging from delight to scepticism.

For rainforest campaigners, the Bali statement's allusion to an urgent need for “meaningful action to reduce emissions from deforestation and forest degradation” was a sweet victory, even if the only concrete step in that direction was a “work programme” to test various approaches.

Under the current regime (expiring in 2012), financial rewards for storing carbon through trees were attached only to reforestation or planting new forests. That restriction became hard to justify as evidence mounted that the destruction of tropical forests caused as much as 20% of heat-trapping greenhouse emissions.

But including “avoided deforestation” in a post-2012 strategy will transform the politics of climate change, globally and inside some countries. For example, with deforestation taken into account, Indonesia and Brazil soar up the table to become the world's third- and fourth-largest emitters.

When the Kyoto protocol was negotiated, deforestation was excluded partly on scientific grounds; people couldn't agree on its precise effects, or on how to measure the carbon loss. Those problems have now been laid to rest by better technology.

But other things have not been settled. Brazil's leaders want a system to reward whole countries for bringing their deforestation rates down to pre-1990 levels and keeping them there. It so happens that Brazil may be the only nation that qualifies. Most other people (including the governor of Brazil's Amazonas state and its indigenous leaders) back a more local and market-based approach.

In any case, systems that rely on the honesty and power of governments will run into problems. Zealous greens are wary of carbon-trading on the moral ground that it lets the rich off the hook; in fact, investors in carbon markets will be the first to shun conservation projects that are manifestly failing because of bad government or corruption.

Take Indonesia, where 80% of deforestation is of dubious legality. Weak law enforcement is the main problem. Contradictory policies—resulting, recently, in a spat between police and the forestry ministry in Sumatra—are another. A decade ago, Indonesia's illegal logging mainly served the pulp and timber industries. Now palm oil, an “ecological” product, is the big driving force. Recent research suggests that for every dollar invested in oil-palm plantations, $20 is recouped in a few years, even without the one-off gain from selling timber. Even if palm-oil prices slip downwards, forest-conservation plans would need to be very robust to compete.

And it is still unclear who would get the money for reducing deforestation. A bad taste was left by the World Bank's failure to consult the UN Permanent Forum on Indigenous Issues before launching a “carbon partnership facility” designed to keep forests intact—an error, the bank insists, that is now being rectified.

The decisions taken at Bali call for a couple more years of trial and error before finding the best way to keep trees standing. But the chainsaws won't stand still.

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Russia, Iran and nuclear fuel

Dangerous liaisons

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Curbing dangerous nuclear technologies gets trickier

WHEN Russia announced it had started shipping low-enriched uranium fuel to power the civilian nuclear reactor it is helping Iran build at Bushehr, George Bush tried to squeeze some comfort out of a piece of news which—for the international effort to curb Iran's nuclear ambitions—was a disappointing about-turn. "If the Iranians accept that [Russian] uranium for a civilian power plant, then there's no need for them to learn how to enrich," he said on December 17th.

True, in theory. But Iran refuses to follow such logic. By making long-delayed fuel shipments to Bushehr now, Russia will weaken further the UN Security Council effort to end Iran's defiance. It also risks undermining plans to limit the spread of dangerous nuclear technologies at a time when many governments, including a number in the volatile Middle East, plan to invest in nuclear power.

Iran's president, Mahmoud Ahmadinejad, insists Iran will not stop its own fuel-making: another 50,000 or more will eventually be added to the 3,000 centrifuge machines now spinning at its uranium-enrichment plant at Natanz. These, say its nuclear officials, will provide low-enriched uranium (used for making electricity, but at higher enrichment levels for bomb-making) for a separate, indigenously built 360MW reactor at Darkhovin, in the province of Khuzistan.

This is a puzzle. Iranian engineers are already building a 40MW "research" reactor at Arak that is worryingly too big for research, too small for electricity generation and ideally suited to produce plutonium (another bomb ingredient) from its spent fuel, but they lack skills both in reactor design and in the manufacture of the larger parts needed for power reactors, says Gary Samore of the New York-based Council on Foreign Relations. Unless Iran gets outside help (the Arak designs were provided by freelancing Russian scientists), Darkhovin could be just an excuse for Iran's continuing its own enrichment work.

With Iran so obdurate, why the changed tack over Bushehr? In 2005 Russia said no fuel would go while questions remained about Iran's peaceful intentions. But inspectors have plenty of those.

Holding back on the fuel for Bushehr was one bit of Russian leverage in the nuclear dispute with Iran that is now being lost. Similarly, Mr Bush's refusal to take the option of a strike against Iran's nuclear facilities off the table seems a lot less credible since a recent National Intelligence Estimate (NIE) concluded that Iran had suspended some elements of a weapons programme in 2003. (Israel and some European governments are worried those efforts may have resumed; and they and American officials point out that at the very least Iran persists with its potentially weapons-usable enrichment work.)

Russia's decision on fuel shipments was made before the NIE was published. Commercial concerns may have tipped Russia's hand, says Mark Fitzpatrick of the London-based International Institute for Strategic Studies, a think-tank. It wants to be seen as a reliable supplier, so as to pick up more reactor contracts from others. Russia, America, some Europeans, Japan and others with advanced nuclear fuel-related technologies also have ideas for fuel-supply services and spent-fuel management as an incentive for governments not to follow in Iran's nuclear footsteps. But Russia is helping Iran show you can have it all.

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Poker

A big deal

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AP

Poker is getting younger, cleverer, duller and much, much richer

DOYLE BRUNSON (above, left) is a poker legend. Twice winner of the game's most prestigious annual tournament, the World Series of Poker (WSOP), held in Las Vegas, the cowboy-hat-clad southerner affectionately known as Texas Dolly also wrote what many consider to be the bible of poker theory, “Super System: A Course in Power Poker”. His reputation among card-shufflers borders on the superhuman. Indeed, after fighting off supposedly terminal cancer in the 1960s, he celebrated his return to the cardrooms with 53 straight wins. Adding to the mystique, both of his World Series titles were won with exactly the same cards: a full house of tens over twos.

Now in his mid-70s, Mr Brunson is still going strong. But not strong enough for Annette Obrestad (above, right), who beat the old master and 361 other entrants in September to win the first ever WSOP event held outside America. Miss Obrestad's victory, which netted her £1m ($2m), shows how much poker has changed since the days when Texas Dolly, Amarillo Slim Preston and Jack “Treetops” Straus held sway. She is only 19 (making her the youngest ever winner of a World Series bracelet) and she is, of course, a woman. She hails from Norway, not Nevada. And though she had previously won over $800,000 in internet tournaments, the event at London's Empire Casino was the first time she had encountered serious opposition in the flesh. The poker press refers to her by her online moniker, annette_15.

Miss Obrestad's route to the grand prize—dumped on the final table in bundles of $50 notes, as is the World Series tradition—required her to see off such modern-day poker luminaries as Chris “Jesus” Ferguson, a hirsute scholar of game theory, Dave “Devilfish” Ulliott, a somewhat less cerebral but wily British professional who wears diamond-encrusted knuckledusters, and Phil “Poker Brat” Hellmuth, arguably the most celebrated (not least by himself) modern player. Jim McManus, a poker player and historian, describes the young Scandinavian's win as a “startling milestone”.

Yet it is also part of a trend. Youngsters are flocking to poker as never before, attracted by its growing cachet and the ever-expanding pots. The plethora of books, blogs and DVDs now easily accessible, and the rapid growth of poker online, means newcomers can learn the art much more quickly than in earlier eras. “When I started out it took years of hard grind at the table to get good. Now the learning curve is

much steeper," says Howard "The Professor" Lederer, a professional player. It is often said that while Texas Hold 'Em, the most popular version of poker, may take only minutes to learn, it takes a lifetime to master. Annette_15 may beg to differ.

The threat to the old guard from quick-learning online players first became apparent in 2003, when the aptly named Chris Moneymaker won the World Series after qualifying through a satellite tournament for players on a poker website. He turned his $40 fee (a tiny fraction of the $10,000 "buy-in" for the pros) into $2.5m, finishing off his final opponent with a colossal bluff. This year's winner in Vegas, Jerry Yang, qualified the same way. After two weeks of intense play, with daily sessions lasting up to 16 hours, the 39-year-old psychologist went home $8.25m richer, promising to give much of it to charity. No other sporting competition (if poker can be called a sport) offers the same reward.

Popular websites such as Full Tilt Poker and PokerStars enjoy peak traffic of tens of thousands of visitors at any given time, occasionally over 100,000. Full Tilt offers visitors the chance to try their wits against a roster of professionals, who play under their own names and are paid according to how well known they are. Poker sites employ some of the snazziest software on the web. They also offer a dizzying array of blogs and forums, which debate everything from "slowplaying" (playing a strong hand with deceptive passivity) to Morton's Theorem (don't ask). One recent discussion had more than 1,600 participants. No wonder it is often said that poker has done more than anything apart from pornography to develop the web.

Star of the small screen

The other force fuelling poker's growth is television. The game has grown rapidly on the small screen since camera crews worked out a way to show the "hole cards" (those dealt face down to each player) using miniature cameras positioned beneath specially designed tables with glass panels. This allowed viewers to see each hand's dynamics as they unfolded. Televised celebrity games have added to poker's appeal. Ben Affleck, Toby Maguire and James Woods are among those who consider themselves accomplished amateurs. Mr Affleck even hired a pro to help him raise his game, and subsequently won California's state poker tournament.

Today poker is the third most watched sport on cable television in the United States, after car racing and American football, trumping even NBA basketball. In America, it is regularly aired on ESPN and the Travel Channel, while Britain has its own poker channel. ESPN's World Series shows regularly get more than 1m viewers, and numbers hold up well even during the busiest sports periods, such as during the major-league baseball play-offs and the NASCAR motorsports season.

AP

The poker economy has never been flusher. There are an estimated 60m-80m regular players in America and perhaps 80m-100m elsewhere. Poker is by far the largest chunk of the online gambling market, which had worldwide revenues of around $15 billion in 2006—a figure that may be closer to $20 billion this year. Poker chips are among the best-selling items on Amazon.com. What was once the preserve of either high-rollers or low-lifes is now being roundly embraced by the mass of ordinary folk in between.

The changing of the guard at the top of poker reflects this move into the mainstream. Harrah's, the casino operator that runs the WSOP, has brought in Jeffrey Pollack, a former NASCAR executive, to smooth its image and entice in corporate money. He has revamped the website, wrung more money out

of ESPN and put poker on the radio (where it works surprisingly well). More impressively, he has lured dozens of sponsors—including Hershey's chocolate, Milwaukee's Best Light beer and Planters peanuts ("the nuts" being the term for an unbeatable hand of cards)—into a game that many consider morally questionable.

Mr Pollack says his aim is to run the WSOP, which was conceived in the late 1960s, as a "38-year-old start-up", constantly innovating and pushing into less developed markets in Europe, Asia and Latin America. An annual tournament in Macau is likely to be the next move. That would put the World Series head to head with the new Asia Pacific Poker Tour, which is sponsored by the PokerStars website. In some Asian countries, such as Thailand, poker is illegal. But China is a potentially huge market, and the game has exploded in popularity in Australia. Some 400,000 Australians joined poker leagues after Joe Hachem, from Melbourne, won the World Series in 2005. That burst of activity prompted a government inquiry.

Another largely untapped market is women. They make up only around one in 20 of all tournament entrants, though Miss Obrestad's victory is likely to encourage more to take the plunge. Mr McManus, who teaches a poker course at a Chicago college, says his female students have just as much of a feel for the game as his male ones. But he also thinks men have the edge in no-limit Texas Hold 'Em, which relies more heavily than other forms of poker on aggression and the willingness to risk everything on a single hand.

Some of the game's most eloquent player-commentators are women, notably Annie Duke, who has won more than $3m in prize money, and Victoria Coren, winner of the London leg of last year's European Poker Tour and author of a poker column in Britain's *Guardian*. Ms Coren describes poker as "a stimulating psychological challenge, combining guts and detective work...a world of its own, offering all the childish appeal of secret places, special languages and staying up late at night." It is hard to imagine Mr "Devilfish" Ulliott describing it that way.

Both would agree, however, that the best players display a good deal of skill, and that poker is a long way from basic forms of gambling such as roulette or lotteries. The object, says Ms Coren, is to control the swings of luck with skill, figuring out how to win the maximum with your luckiest hands and lose the minimum with your unluckiest ones.

The skill-versus-luck debate has crackled back to life because of the passage of a law last year, sneakily tacked on to a port-security bill, which sought to bolster existing legislation against internet wagering by blocking Americans' access to accounts that can be used to gamble online. All games that are "predominantly" subject to chance were covered by the ban. Poker was included. For reasons best explained by lobbyists, horse racing, fantasy sports and lotteries were exempted. This discrepancy had already landed America in hot water at the World Trade Organisation, thanks to a case brought by tiny Antigua, home to several online gambling sites.

America's Department of Labour has given a nod to the element of skill, in some eyes, by last year recognising "professional poker player" as an official occupation. Courts, however, tend to view poker as a game of chance. That, Mr Lederer is convinced, is only because the opposing arguments have been botched at the bench.

As he concedes, it is hard to argue that a seasoned professional will beat a first-timer in any given hand. But there is evidence aplenty that, over the long run, a player with a head for calculating odds and a feel for the psychology of the game, such as bluffing, will always overcome an untalented opponent.

The skill, Mr Lederer argues, is in the betting. And it is apparent in the fact that you can win without the best hand. More than half of all hands end without the cards being shown, not because one player got lucky but because he managed to persuade the others, given their analysis of the available information and the size of the pot, that it was sensible to fold. When no one declares their hand, can it really be argued that the outcome was determined by luck?

At the highest level, decisions about betting, bluffing and folding are based on the complex juggling of probabilities. "What drew me to poker is that it is essentially an academic endeavour," says Ms Duke. She is one of a growing group of full-time players who came to poker through game theory and mathematics, not through any love of a flutter. (Indeed, she never plays craps or roulette.) Others include Mr Lederer (her brother) and Mr Ferguson, who has a doctorate in computer science and writes academic papers on probability theory with his father, a statistician at UCLA.

Thomas Bihl, winner of a recent HORSE tournament, in which players have to show mastery of five different styles of poker, thinks the game has more in common with finance than it does with basic forms of gambling, because it requires the constant pricing and repricing of risk. Mr Bihl, a former stock trader, says the move from his old job into poker was a natural progression. Though his £71,000 win was “a huge lift”, he says that he is motivated not by money but by the chance to use his brain to outfox opponents. This is a common refrain among regular players. As Ms Coren put it in a recent article: “Cash is nothing more than chips, just the tools of the trade, like fishing rods to an angler. The game is all about money, and nothing to do with money.”

Those who think skill predominates also point to the fact that some players excel at the game while others don't. Dan Harrington made the final table of the WSOP in both 2003 and 2004, the odds of which would be 25,000 to one if it were down to chance. Stu “The Kid” Ungar, a brilliant player with a self-destructive streak, won three times in not many more attempts before succumbing to drugs.

Moreover, when wealthy amateurs pit their wits against professional players steeped in poker theory, more often than not they lose their shirts. In a number of sessions beginning in 2001, Andy Beal, a Dallas-based banker, locked horns with a syndicate of pros, including Mr Lederer, convinced that he could come out on top. He did not.

Nevertheless, luck is important. It blends with skill to produce a game that is “much like life, full of incomplete information and second-guessing,” says Mr Lederer. Poker is certainly more exciting to most than chess, a game of complete information and limited psychology where the better player always wins. Tellingly, whereas computers can be programmed to play chess at the highest level, they still have a long way to go to match expert players in poker games with more than two participants. The best attempt so far, Polaris, developed by researchers at the University of Alberta, failed to get the better of two top players, Ali Eslami and Phil “Unabomber” Laak (who plays hooded).

After two weeks of poker, with daily sessions lasting up to 16 hours, Jerry Yang, a psychologist, went home $8.25m richer

Moreover, professionals say that poker's generous dollop of luck is good for them on balance, because it attracts money from neophytes who fancy their chances of beating the top players in tournaments. Some pros disparagingly call such players “ATMs”. But, as Mr Moneymaker showed, the newcomers occasionally win big. His victory in 2003 led to a surge in entrants for the World Series main event from 512 in 2000 to 8,773 in 2006. A dip this year to 6,358 reflected the new American law's effective ban on internet sites buying satellite-competition winners into the tournament. (Some tried to get around this by sending the winners cheques instead, but most recipients simply held on to the money rather than using it to buy themselves in.)

“It doesn't take most young people long to realise they won't be the next Michael Jordan. But they can all aspire to be the next Phil Hellmuth, and they don't even have to work out,” says Mr Hellmuth, slurping a full-cream mocha. He then quickly points out that poker requires a great deal of mental stamina, and that he promotes an energy drink.

Poker for pupils

Parents are increasingly encouraging their children to play, he adds, because it is mentally more rewarding than video games and does not mix well with alcohol (at least if you care about winning). “When I started it was seen as a bit of an outlaw pastime, for rogues and cheats. Now it's a huge bottom-up movement,” he says.

It might seem a bit of a leap to go from here to putting poker on the curriculum. But some academics see it as a worthy subject of study. Chief among them is Charles Nesson, a professor at Harvard Law School. Earlier this year he founded the Global Poker Strategic Thinking Society (GPSTS), whose awkward name belies a clear set of goals: to highlight poker's role in teaching patience, strategy and money management, and in improving cognitive skills. “Poker offers metaphors for a range of life skills and could be a wonderful educational tool,” says Mr Nesson, who plays a regular game with other law professors, including Alan Dershowitz—though he has yet to play with Antonin Scalia, a Supreme Court justice known to have a fondness for poker.

Poker is, first and foremost, a game of managing resources, argues Mr Nesson, teaching a cautious approach to risk-taking, not recklessness. There is some evidence for this. One study, comparing experienced poker players with financial- market traders, found the players less likely to exhibit over-

confidence.

An unlikely social-welfare tool

Determined to counter what he sees as the demonisation of poker by the American right, and the resulting squeeze on personal freedoms, Mr Nesson is working on a pilot programme to teach the game to disadvantaged children in schools in America and Jamaica. He muses about turning a property he runs in Second Life, a virtual world, into an online poker university.

AP

Bets are on at the World Series

Ms Duke sees other ways in which poker teaches “life skills”. It taught her, for instance, how to be a good loser (“Even the best lose most of the hands they play. If you let that get to you, it will kill you”). She says she even uses poker theory when dealing with her children: “I always bet the minimum when making a threat. If you say no TV rather than no Disneyland, you can always raise later.”

By enlisting the help of players, statisticians, law students and lobby groups such as the Poker Players Alliance, whose membership has swollen to 860,000, Mr Nesson hopes to roll back not only the federal ban on online gambling but also the worst bits of the nonsensical patchwork of state laws. Massachusetts law, for instance, makes it hard for the university to hold even a charity poker tournament. “Are they afraid that people will become addicted to giving money to good causes?” asks Andrew Woods, a Harvard student who helps to run the GPSTS.

As the pokeristas sharpen their legal arguments, they are hoping for some extra help from the statisticians. Online poker sites have reams of game-by-game data. These could, in theory, be used to show what makes some players better than others, and what defines their skill (Bluffing? Shrewd betting based on the rapid calculation of odds? Or both?). Though research in this area has been thin on the ground to date, number-crunchers are starting to rise to the challenge.

Among them is Steven Levitt, an economist at the University of Chicago and author of “Freakonomics”. He oversees a project called Pokernomics. It aims to collect millions of hands (which players can store using readily available tracking software) and analyse them systematically in the hope of answering questions. Does a big stack of chips allow players to bully others and win even more? To what extent does position relative to the dealer matter? Are there simple strategies that can be used to win money even with losing hands?

These efforts may produce fascinating results. Or they might reveal nothing much. Even if the data highlight strong trends, it may still not be clear which are caused by skill and which by luck, says Jay Kadane, a statistics professor at Carnegie Mellon University who studies games.

AP

Poker's getting bigger

Perhaps a better way to win over judges and lawmakers would be to highlight poker's place in the American psyche. Introduced by French colonials, as a game called poque, it soon spread from its original base in the Mississippi delta. By the late 19th century it had become a prominent cultural facet across the country, not only in the South or Wild West. Much ink has been spilled analysing its appeal to Americans. The answer may lie no deeper than Walter Matthau's one-liner about poker exemplifying “the worst aspects of capitalism that have made our country so great”.

Poker has long fascinated America's great and good, from politicians to generals to captains of industry. Presidents Roosevelt (both), Truman, Eisenhower and Nixon were all keen players. Nixon was famously good: most of the funding for his first congressional run came from poker winnings. Poker was said to have inspired cold-war tacticians. It is still a useful military motif: recall the playing cards used to represent Saddam Hussein and his most-wanted cohorts. Poker financed a sizeable chunk of Microsoft's start-up costs. Bill Gates once said he learned more about business strategy at the baize than in classrooms—though these days he apparently prefers the more stately game of bridge.

Not all famous players have made such good role models. As he partied away the declining years of his career, Errol Flynn incurred some excruciating poker losses, including, on one particularly bad night, a Caribbean island he had hoped to develop into a holiday resort. John Wayne had some shockers too, though in one memorable game he won Lassie from the canine star's desperate owner.

Getting serious

What would Nixon, Flynn and Wayne have made of poker today? They would surely have marvelled at the transformation of “the cheater's game” into a multi-billion-dollar industry, pumping out new millionaires almost daily. Even they might have been shocked at the latest season of “High Stakes Poker”, a television series in which players buy into each game for $500,000 apiece and the winner takes home more than $5m.

They might, perhaps, have been disappointed that the game had lost some of its backroom edginess. Miss Obrestad's generation are more likely to put their excess winnings into tax-free bonds than blow them betting on a single round of golf, as Mr Brunson and his Las Vegas pals used to do in their madder moments. Still, those hoping to win over poker's sceptics will find no better example than young annette_15. She is stern, sober and chillingly focused on her game. She appears to be exceptionally good at it too. Either that or amazingly lucky.

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The poignancy of piers

The end of the pier

Dec 19th 2007 | ATLANTIC CITY, BRIGHTON, CONEY ISLAND, SOUTHEND AND SOUTHWOLD

Musings on a favourite memento mori

Getty Images

"'A COLD night,' Cubbitt said. The old gentleman swivelled his eyes on him like opera glasses and went on coughing: hack, hack, hack: the vocal chords dry as straw. Somewhere out at sea a violin began to play: it was like a sea beast mourning and stretching towards the shore."

The book is Graham Greene's "Brighton Rock"; the violin is playing, unseen through sea mist, in the concert hall on the West Pier. Both Brighton's piers have starring roles in the story: they are the stages where killings are discussed, threats made, fortunes told. Savage gang warfare is intercut with candy floss and penny-in-the-slot machines. Laughter keeps pace with horror. Life is at its bawdiest and most reckless, but death lurks everywhere. This is the essence of piers.

No construction is more appealing, or more redolent of mortality, than a jetty that sticks out from the shore. It tells men they can walk on water, and suggests they can stroll as far towards infinity as their engineering can take them. Piers symbolise escape from the everyday, from the shore, from work, from life itself. For that purpose, they are more reassuring than a ship: though planked and decked like one, and originally manned with pier-masters in crypto-naval uniforms, most are attached to solid rock. It can come as a sudden, giddying surprise, amid the fairground tat of piers, to see the sea crawling darkly under your feet as you sip your cup of tea, or a seagull flying below you. Early piers were mocked as "disappointed bridges", fixed at one end but, at the other, yearning towards the void. A man on a pier never quite lets go of the land. But, seeing it from a distance and another angle, he becomes a little disoriented, and much more daring.

A century and a half ago, promoters of piers were surprised at this. They imagined that an entry toll, a penny in the turnstile, would keep the indecorous at bay and ensure that solemn middle-class promenaders could compare their bonnets and parasols in peace. Piers were a marine version of the parkland walks at spas, sedate and quiet. Grand balls, art exhibitions and royal visits took place on them, while the plebs bobbed below on small boats and craned their necks to see.

Yet as soon as working men, too, were given official holidays and allowed to have fun on Sundays, piers ran down-market. At first, the poor man paid his penny to sit and observe the higher classes and to dream he might be like them. Then, gradually, he shed the conventions that restrained him. He could be rude on the pier, gawking at What the Butler Saw or buying saucy postcards in which breasts were confused with blancmange; he could buy chips, candy floss and silly trinkets he would never want at home; he could cram on silly hats, and the girls could wear skirts that whipped well above their knees in

the wind. (“Young ladies”, carped *Queen* in 1900, “give themselves up to *abandon* on piers.”) Soon the pier managers not only accepted this, but also encouraged it, by getting rid of the turnstiles and tolls that had provided, in the 19th century, 80-90% of takings. They could profit instead from the mob's adventurousness: that sense of being in limbo, neither on sea nor on land, suspended in a state of fantasy.

Pink paint and corrosion

Most piers still encapsulate 19th-century dreams. They are lined with pleasure domes, octagonal kiosks, maharajahs' palaces and Ottoman minarets, their lattice and lacework done in iron instead of shining marble. They offered, from the beginning, the latest proofs of man's prowess: telescopes, the telegraph, radio broadcasting, moving pictures, besides the marvellous ingenuity of their own construction. Eugenius Birch, Britain's greatest pier-builder and the inventor of the screw-pile, was almost as well known in his day as Stephenson or Brunel. The stalking girders of piers subdued the mighty deep, or at least half a mile of it, and their twinkling electric lights crept out bravely from the shore; in Atlantic City, New Jersey, no fewer than 27,000 outlined the Steel Pier against the dark. In Britain pleasure piers grew from every nook of the coast just as the Empire expanded, and the blare of military bands along their decks echoed the triumphal march of colonisers overseas.

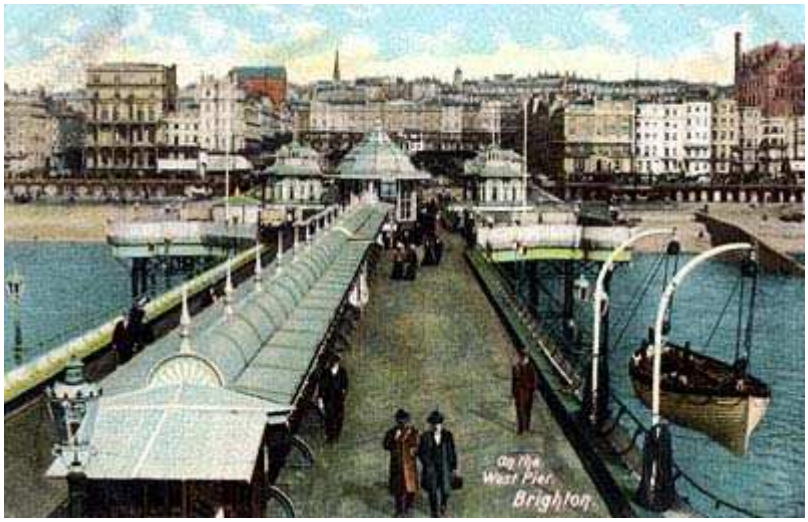
But dreams don't last. Look over the rail on any pier, and the rust is inch-thick and flaking from its girders. Green weed and grey barnacles encrust every part under the sea. Within five years, every plank on the deck will need replacing. The annual slaps of paint—sea-green for the railings, bright pink for the doughnut stall—cannot disguise the fact that the layers are plastered round corrosion.

Of 81 piers round the British coast at their zenith, in 1908, 26 have gone. Of dozens in America (though America never knew the craze as Britain did), only seven major piers remain. Occasionally their bones still lie on the shoreline like the remains of behemoths, too costly to demolish and, in their way, a *memento mori* that people wish to preserve. Atlantic City has the Garden Pier, a warped spine of concrete sprouting grass; in Brighton, the West Pier concert hall where Cubbitt's violin played is now a humped ribcage half-submerged in the sea. Visitors still stand like mourners at a funeral, silent and thoughtful, and pick rust from its girders. The fluted columns that once held glass weather screens, the lampstands with their coiling serpents, the flowering and curling iron balustrades, are stored in heaps under the sea wall. All that proud work is decaying and disappearing, as inevitably as the tides come in and out.

Million-dollar dreams

The fates of piers are easily written. They rot, collapse or are eaten by sandworms. Ships crash into them. Gales and high seas remove whole sections of them, shot-blasting them with shingle or sand until they break. The wooden decks, the drying wind and the obsessive, repeated coats of paint feed enormous fires, still the main reason for their demise. Their very frailty, a mere network of girders, is preferred to the reinforced concrete that might make them last. When they die it may be in a peculiarly human way, heaving and shuddering along their whole length before they founder. Yet most pier-deaths are slower. The gates are padlocked; the pier is closed; owners, council and preservationists argue; the elements do their work.

MEPL



Walk on the wild side

A natural disaster is often the last straw for pier-owners. Piers have to pay for themselves, and few make profits nowadays; even at their peak in the 1860s, they never brought in the promised dividend to investors. They are monuments to 19th-century speculation, to the new delights of limited companies and shareholder security, and to dreams. In the glory days of piers, the middle classes and tradesmen of seaside towns bought shares in them to dip a cautious toe in the stockmarket, and town corporations saw them as the key to prosperity and the apogee of development. All were eventually disappointed.

Almost no new piers are being built now. To put up such a structure, working largely under sand-filled water, costs three to five times what it would on land for perhaps 50 years of life. Rising sea levels, too, increase the stress caused by the waves. So the old are repaired and recycled according to the swings of fashion, their life a ceaseless struggle against erosion and decline. True, there are success stories, or dreams of success. On Brighton's Palace Pier, where the Noble Organisation has invested in a dazzling array of slot machines and fairground rides, entry is free, as are deckchairs in which to sit and watch the sights of London-by-the-sea. Southwold Pier, in Suffolk, has reinvented itself as a cream-painted string of upmarket boutiques (“Seaweed and Salt”) and ingenious automata, such as a “quantum tunnelling telescope” that preserve the traditional inventiveness of piers. Southend Pier has acquired a new entrance that is all curving steel and glass; Boscombe Pier, next to Bournemouth, hopes to be revived by a £1.4m artificial surf-reef being built beside it; Brighton West's remains may be incorporated into a gigantic viewing tower, the i360, in which people will rise in the air, on a vertical pier, rather than walk on water.

No British pier has gone as far as the Pier Shops at Caesar's in Atlantic City, where, in the shadow of a gigantic Roman-style casino, an enclosed street of glittering boutiques winds over the waves. The pier is in fact part of the casino, a similar gamble. Despite the eternal hope of money from somewhere, even the healthiest specimens seem financially on the edge.

Today's piers have no monopoly on thrills: most of those lurk under the pier, a dark demi-monde of corroded columns, braces and lattice-work where, at low tide, there is just enough sand for the young or the desperate to have sex on. Pier-decks are largely the resort of the old, who sit in cardigans out of the wind and watch the young passing. But they still hold out the possibility of sudden wealth, if the grabber-arm can avoid the giant cuddly toys and instead unlock, in a glittering torrent, the glassed-in trove of silver. The empty gaze of the old into the distance is mirrored in the gaze of the young into slot machines.

Atlantic City once had Young's Million-Dollar Pier, which became Hamid's Million-Dollar Pier: although gambling was never allowed there, the name encapsulated both brassy new entertainment and the off-chance of getting rich. But serious spending, or winning, has seldom been seen on piers. A more reliable living could be made, in the old days, by urchins diving the waters or strolling the sands to pick up pens and watches dropped through the boards by promenaders, or coins tossed through the rails.

Even an empty jetty, like the melancholy Steeplechase Pier at Coney Island in New York, draws Russian and Chinese fishermen eager to net the tiny fish that gleam in silver schools round the piles, for the little fry will catch bigger fish, and the bigger ones (mostly herring) are worth curing and eating. Their bicycles carry industrial-size grab-nets, rice sacks and white plastic buckets in which crabs clamber slowly. On Southend Pier, the world's longest, which ends after 1.34 miles in water so deep that flounder, mackerel, cod and plaice can be caught in it, a grey August day finds knots of anglers at every shelter. Some sit

companionably on a seat dedicated to an absent colleague, “Loved by everyone who knew him, except the fish.”

Corbis

In early years, invalids were restored to health by being wheeled above the sea. With copious lungfuls of that “life-prolonging air” inside them, they would be themselves again. The healthy, besides sea-walking, were offered reading rooms and showers at the shore end. Self-improvement and piers went together. Self-knowledge, too: your picture taken, your voice recorded, as soon as technology allowed it. On Southwold Pier the “Expressive Photo-Booth”, which moves while you're in it, captures “Your True Personality: Thrilled, Exhilarated, Distracted, Weightless”. Pier-strollers still like to read their astral charts, cast by Gypsy Rose Lee or her descendants and printed out on pink slips of paper; they discover “the unique side of you” by obtaining from a lurid kiosk the meaning of their surname, or the details of the day they were born.

Into the unknown

This sense of self-discovery was particularly strong, and is still strongest, at the very end of the pier. Traditionally the pierhead was where steamers would arrive and depart, and where roads ended; Santa Monica Pier, in California, marked the place where Route 66 petered out into the ocean. At the pierhead prudent promenaders, blown to the limit of their endurance, would have to grip their hats and turn back. But in the film “Mona Lisa” the end of Brighton's Palace Pier becomes a horrifying cul-de-sac from which the characters barely escape.

When open-air dancing became the rage, pierheads were the place for its erotic riskiness. The biggest ballroom in the world could be found, from 1904-11, at the end of the Dreamland Pier in Coney Island, before the flames destroyed it. Nude bathing was still allowed from the ends of piers long after it was banned from the beaches. They were the haunt, too, of performing swimmers, who would drink cups of tea, or lie and read the paper, in the sea; above them, “professors of natation” would perform death-defying plunges in chains or into fire. At Bognor, and elsewhere, men did their best to fly from the end of the pier. In Atlantic City the divers were horses, plunging 40 feet into a tank of water with a bareback rider clinging on.

Many piers had theatres at their heads, typically the first parts to close or burn down. The shows put on there—pantomimes, stand-up comedy, mysteries and thrillers—catered for the happily undiscriminating, and plays and actors invalided out of London's West End could limp on there for years. Playing the pier was a particular challenge, from shouting against the elements to struggling along the deck with the flats to putting on costume with the swimmers, in a cubicle among the piles. But it launched careers. An actor who could tread the stage in the middle of the sea, cheekily ad-libbing into the huge darkness, could put up with most reverses—and could catch fish through the planking in the interval.

The end of the pier is the ultimate dare, the part most likely to be cut off by fire or a drifting vessel

The end of the pier is the ultimate dare, the part most likely to be cut off by fire or a drifting vessel as the last girders snap. It offers the last laugh, the last reckless, stupid act, in the face of death; in

“Brighton Rock”, it is where Pinkie shows Rose the bottle of vitriol that will dissolve him. On the Pier at Caesar's the casual stroller, at the end of the dimly-lit mall that might be anywhere, finds a thunderous neon-lit water show and then suddenly, through huge glass doors, the shock of the silent sea itself. The man-made entertainment is put in its place by the power of nothingness.

Traditionally the end of the pier is the place for suicide, where people feel they can go no farther; recently it has also become a favourite spot for “tombstoning”, leaping into the water for the hell of it. “Think before you jump”, read the posters on Brighton's Palace Pier. “Do you know what's down there?” Of course not; no one does; but the urge to find out may be stronger than any instinct to obey.

The end of the pier is also the place for what is euphemistically called “scattering”, the dispersal of the ashes of the dead. “Good day for a scattering”, they say at Southend, meaning that the wind is south-westerly and won't blow the departed back into the faces of his friends. The train along the pier, the *Sir John Betjeman*, often acts as a funeral hearse for groups of quiet people in anoraks, or chatty Indian families with plastic bags of marigolds to scatter on the grey North Sea. An hour after high tide is the recommended time; the east slipway of the pierhead is favoured, less because the east symbolises resurrection than because at that point only, between the dreary arms of the Essex coast and the refineries of the Isle of Grain, there is a gap of open sea.

TopFoto

People's feelings on piers are well summed up at Southwold in Suffolk, where the neat and witty restoration of the pier has been financed in part by selling small plaques along the railings. There are 3,000 of them, a few years old but already as worn, out in the salt wind, as medieval brasses. Most are memorials to parents, dogs, friends, nans, or the purchasers themselves. Being where they are, they are cheekier and more intimate than gravestones. “In memory of Ted Smith: It must be Wednesday”. “Alexander Robert Kearton: ‘Just resting my eyes’”. “William Scrivener Waters: Left for London, April 1853”.

Being where they are, too, some plaques become philosophical. “To infinity and beyond”. “We flew our kite and lost it here”. “For Robin: Gone into the mystic”. “Bethan and Benedict Evans: So you found it then.” And, perhaps inevitably, those lines from e.e.cummings:

> For whatever we lose (like a you or a me)
> It's always ourselves we find in the sea

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Falling off high places

Human lemmings

Dec 19th 2007

For those who like leaping into the abyss, Norway is the place to do it

Scanpix-PA

TRY this next time you are strolling on a cliff. Toss a rock (the size of a blood orange is good) over the edge and begin to count. It falls at the speed of a tumbling human so will reach 200km per hour after nine seconds, roughly the acceleration of a supercar. Keep counting. If the cliff is sheer and tall, like the more dramatic ones above a Norwegian fjord, you should be able to tick off many seconds before hearing a distant crack. That is how long you might fly, unaided, before your soft flesh is mangled on the granite below.

Next, get ready to hop off. You will probably be terrified, which is a shame, for fear interferes with perception. Tunnel vision blocks the smell of moss on the cliffside, the tinkling of a waterfall halfway down. But the adrenalin rush, legs hollow and wobbly, ensures it is a memorable experience. “That second before you step off is the best. Everything is quiet, you step into emptiness,” says Karina Hollekim who, after more than 400 flying leaps, is emerging as a star of increasingly popular films about falling off high objects.

Now go over. A Superman pose (keep your stomach in) is the standard method, some 45° forward, so that in the first five or six seconds you become horizontal. The more daring go head first to get up speed. At first you hardly feel the motion. There is no sound (screams aside); not even the rustling of wind in your clothes. You may feel you are hanging, frozen, in mid-air. “When I first jumped it seemed I wouldn't move, or fly, at all. For those first seconds I thought it was not working,” recalls Stein Edvardsen, a pioneering Norwegian jumper who has been at it for more than a decade. “It felt like an eternity as Mother Earth was pulling me down,” he says.

Butterflies are unlikely—it is not like hitting turbulence in a plane—because your stomach falls at the same speed as the rest of you, but you feel weightless and time slows. Then, after six seconds, there is friction. “To get an idea of what it feels like, put your hand out of the window of the car when you are driving at 150km per hour,” suggests Mr Edvardsen. So far you have been falling; now you are ready to fly.

Being close to the wall makes it especially satisfying. Ms Hollekim likes spotting startled birds that nest in cracks in the rock or, jumping from skyscrapers, to study roofs of smaller buildings as they rise up. At this speed the human body may curve away from the cliff. At a popular spot in Norway, Kjerag near Stavanger in the west, you have 16 seconds of freefall in which to swoop around, some of it just ten metres from the rock face. In Trollveggen (Troll Wall), an even more dramatic drop in the middle of the country, you may plummet for a long half minute, allowing time for backflips, somersaults, or hurtling

side by side with a friend. Then, sometimes as late as a second or two before impact, you should find the cord to deploy your parachute. You need both time and speed for the chute to prove useful, however. Pulling the cord too late is one of the easier ways to kill yourself. Falling too slowly—if you have made the mistake of leaping from something near the ground, like a church tower—could be fatal, too, as the parachute may fail to open fully.

Panos

To prolong the flight some have turned to fancy dress. Wingsuits, which have flaps between the limbs, look ridiculous but allow cliff-jumpers to float in the air for minutes at a time, changing direction at will. Oyvind Lokerberg in Trondheim is one of a group of ten local men who test the dynamics of flying from mountains in wingsuits. The goal is to get up as much speed as possible, giving the flyer more control. “Today you can reach 350km per hour in almost a head-on dive, then when you pull up into the horizontal you can be moving at about 230km per hour,” he says. The perfect suit covers the smallest area possible while still giving decent lift (the worst are about as effective as clinging to a mattress). The current fashion seems to be a suit that looks like a bat or a flying fox (see left). Mr Lokerberg and his colleagues refine their designs in wind tunnels then try them out on mountains.

Eventually, thinks Ms Hollekim, someone will try to land in a wingsuit, without using a parachute. Mr Lokerberg, laughing, is sceptical: “Remember one day Newton [or rather his law of gravity] is going to come and get you.” A flight in a wingsuit alone would demand an extremely soft spot—a hillside covered in deep powdered snow, for instance—to land in.

Until then enthusiasts seek new thrills by finding new places to fall from—“You get tired of jumping off the same cliff every day,” says Mr Edvardsen—or by trying more convoluted acrobatics on the way down. Ms Hollekim grew fond of throwing herself off mountains while on skis. The weight of the equipment makes it much harder to keep upright in the air and skis stop you looking over the edge before you leap. Now, after 25 efforts, she thinks ski-basing is a bit too risky. Gripping videos on YouTube show others sledging off mountain tops, cartwheeling over the edge and dancing their way into the abyss.

This weird sport is known as base-jumping: the name refers to the four things that can be leapt from—buildings, antennae, spans (bridges) and earth (cliffs). It is increasingly popular. In America enthusiasts make an annual pilgrimage to El Capitan, a cliff in Yosemite National Park which was the site of the first such jump, in 1966. Those keen on leaping from tall buildings flock to cities in Asia. Kuala Lumpur hosts an annual world championship. But Norway, well-supplied with fjords and cliffs, remains the sport's spiritual home. Carl Boenish, the American who named it, died jumping off Trollveggen in 1984; Thor Axel Kappfjell (pictured top), another base-jumping hero, died jumping off Kjerag in 1999.

Norwegians are an outdoors sort of people, and all that nature “invites you to use it” says Ms Hollekim. Jumpers are supposed to be experienced sky-divers before leaping from land. In practice not everyone is. The kit (an appropriate parachute and a good pair of boots) is about $2,500 new, and some jumpers cut costs by buying second-hand. Malfunctions are often deadly. As there is no time to deploy a second parachute nobody carries a spare.

Parachutes open too late or squalls of wind send a jumper into a cliff. The unluckiest have crashed onto a ledge and died slowly from exposure

Organised events seem pretty safe: this summer at Kjerag, for example, saw 2,500 jumps completed with only a broken ankle to show for it. But fatal accidents are hardly uncommon. Jumping off Trollveggen was banned after 11 accidents and four deaths in the space of 280 jumps in the early 1980s. An experienced Australian was killed in August in north-west Norway when his parachute failed. A list online details 120 jumpers killed at the latest count. The cause of death is usually described as “impact”, although drowning has claimed a few lives. Parachutes open too late or squalls of wind send a jumper into a cliff. The unluckiest crash onto a ledge and die slowly from exposure. But without the risk, it wouldn't be fun.

Despite appearances it does not seem to attract the mad or suicidal. Jumpers have to be meticulous about their gear, and many seem as attracted by the outdoor life as by the adrenalin.

The enthusiastic Ms Hollekim is thrilled to be alive and walking. She limps off to her latest movie premiere in London after describing how an entangled parachute nearly killed her in 2006. She hit rocks at more than 100km per hour. Her legs were pulped, fractured in 25 places, and she lost 3.5 litres of blood. She spent four months in hospital, underwent 15 operations, narrowly avoided amputation, and endured nine months in rehabilitation. The pain, she says, was unbelievable. But jumping off cliffs has been the most powerful experience of her life and she regrets none of it. “It forces you to feel. Extreme fear, then relief, then happiness. In my everyday life I don't feel that much. But, in the air, it's like being in love.”

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Economist.com OPINION

Beauty and success

To those that have, shall be given

Dec 19th 2007

Illustration by Brett Ryder

The ugly are one of the few groups against whom it is still legal to discriminate. Unfortunately for them, there are good reasons why beauty and success go hand in hand

IMAGINE you have two candidates for a job. They are both of the same sex—and that sex is the one your own proclivities incline you to find attractive. Their CVs are equally good, and they both give good interview. You cannot help noticing, though, that one is pug-ugly and the other is handsome. Are you swayed by their appearance?

Perhaps not. But lesser, less-moral mortals might be. If appearance did not count, why would people dress up for such interviews—even if the job they are hoping to get is dressed down? And job interviews are turning points in life. If beauty sways interviewers, the beautiful will, by and large, have more successful careers than the ugly—even in careers for which beauty is not a necessary qualification.

If you were swayed by someone's looks, however, would that be wrong? In a society that eschews prejudice, favouring the beautiful seems about as shallow as you can get. But it was not always thus. In the past, people often equated beauty with virtue and ugliness with vice.

Even now, the expression “as ugly as sin” has not quite passed from the language. There is, of course, the equally famous expression “beauty is in the eye of the beholder”, to counter it. But the subtext of that old saw, that beauty is arbitrary, is wrong. Most beholders agree what is beautiful—and modern biology suggests there is a good reason for that agreement. Biology also suggests that beauty may, indeed, be a good rule of thumb for assessing someone of either sex. Not an infallible one, and certainly no substitute for an in-depth investigation. But, nevertheless, an instinctive one, and one that is bound to redound to the advantage of the physically well endowed.

Fearful symmetry

The godfather of scientific study of beauty is Randy Thornhill, of the University of New Mexico. It was Dr Thornhill who, a little over a decade ago, took an observation he originally made about insects and dared to apply it to people.

The insects in question were scorpion flies, and the observation was that those flies whose wings were most symmetrical were the ones that did best in the mating stakes. Dr Thornhill thought this preference for symmetry might turn out to be universal in the animal kingdom (and it does indeed seem to be). In particular, he showed it is true of people. He started with faces, manipulating pictures to make them more and less symmetrical, and having volunteers of the opposite sex rank them for attractiveness. But he has gone on to show that all aspects of bodily symmetry contribute, down to the lengths of

corresponding fingers, and that the assessment applies to those of the same sex, as well.

The reason seems to be that perfect symmetry is hard for a developing embryo to maintain. The embryo that can maintain it obviously has good genes (and also a certain amount of luck). It is, therefore, more than just coincidence that the words “health and beauty” trip so easily off the tongue as a single phrase.

Other aspects of beauty, too, are indicators of health. Skin and hair condition, in particular, are sensitive to illness, malnutrition and so on (or, perhaps it would be better to say that people's perceptions are exquisitely tuned to detect perfection and flaws in such things). And more recent work has demonstrated another association. Contrary to the old jokes about dumb blondes, beautiful people seem to be cleverer, too.

One of the most detailed studies on the link between beauty and intelligence was done by Mark Prokosch, Ronald Yeo and Geoffrey Miller, who also work at the University of New Mexico. These three researchers correlated people's bodily symmetry with their performance on intelligence tests. Such tests come in many varieties, of course, and have a controversial background. But most workers in the field agree that there is a quality, normally referred to as “general intelligence”, or “g”, that such tests can measure objectively along with specific abilities in such areas as spatial awareness and language. Dr Miller and his colleagues found that the more a test was designed to measure g, the more the results were correlated with bodily symmetry—particularly in the bottom half of the beauty-ugliness spectrum.

Faces, too, seem to carry information on intelligence. A few years ago, two of the world's face experts, Leslie Zebrowitz, of Brandeis University in Massachusetts, and Gillian Rhodes, of the University of Western Australia, got together to review the literature and conduct some fresh experiments. They found nine past studies (seven of them conducted before the second world war, an indication of how old interest in this subject is), and subjected them to what is known as a meta-analysis.

The studies in question had all used more or less the same methodology, namely photograph people and ask them to do IQ tests, then show the photographs to other people and ask the second lot to rank the intelligence of the first lot. The results suggested that people get such judgments right—by no means all the time, but often enough to be significant. The two researchers and their colleagues then carried out their own experiment, with the added twist of dividing their subjects up by age.

Bright blondes

The results of that were rather surprising. They found that the faces of children and adults of middling years did seem to give away intelligence, while those of teenagers and the elderly did not. That is surprising because face-reading of this sort must surely be important in mate selection, and the teenage years are the time when such selection is likely to be at its most intense—though, conversely, they are also the time when evolution will be working hardest to cover up any deficiencies, and the hormone-driven changes taking place during puberty might provide the material needed to do that.

Nevertheless, the accumulating evidence suggests that physical characteristics do give clues about intelligence, that such clues are picked up by other people, and that these clues are also associated with beauty. And other work also suggests that this really does matter.

One of the leading students of beauty and success is Daniel Hamermesh of the University of Texas. Dr Hamermesh is an economist rather than a biologist, and thus brings a somewhat different perspective to the field. He has collected evidence from more than one continent that beauty really is associated with success—at least, with financial success. He has also shown that, if all else is equal, it might be a perfectly legitimate business strategy to hire the more beautiful candidate.

Just over a decade ago Dr Hamermesh presided over a series of surveys in the United States and Canada which showed that when all other things are taken into account, ugly people earn less than average incomes, while beautiful people earn more than the average. The ugliness “penalty” for men was -9% while the beauty premium was +5%. For women, perhaps surprisingly considering popular prejudices about the sexes, the effect was less: the ugliness penalty was -6% while the beauty premium was +4%.

Since then, he has gone on to measure these effects in other places. In China, ugliness is penalised more in women, but beauty is more rewarded. The figures for men in Shanghai are –25% and +3%; for women they are –31% and +10%. In Britain, ugly men do worse than ugly women (-18% as against -11%) but the beauty premium is the same for both (and only +1%).

The difference also applies within professions. Dr Hamermesh looked at the careers of members of a particular (though discreetly anonymous) American law school. He found that those rated attractive on the basis of their graduation photographs went on to earn higher salaries than their less well-favoured colleagues. Moreover, lawyers in private practice tended to be better looking than those working in government departments.

Even more unfairly, Dr Hamermesh found evidence that beautiful people may bring more revenue to their employers than the less-favoured do. His study of Dutch advertising firms showed that those with the most beautiful executives had the largest size-adjusted revenues—a difference that exceeded the salary differentials of the firms in question. Finally, to add insult to injury, he found that even in his own cerebral and, one might have thought, beauty-blind profession, attractive candidates were more successful in elections for office in the American Economic Association.

That last distinction also applies to elections to public office, as was neatly demonstrated by Niclas Berggren, of the Ratio Institute in Stockholm, and his colleagues. Dr Berggren's team looked at almost 2,000 candidates in Finnish elections. They asked foreigners (mainly Americans and Swedes) to examine the candidates' campaign photographs and rank them for beauty. They then compared those rankings with the actual election results. They were able to eliminate the effects of party preference because Finland has a system of proportional representation that pits candidates of the same party against one another. Lo and behold, the more beautiful candidates, as ranked by people who knew nothing of Finland's internal politics, tended to have been the more successful—though in this case, unlike Dr Hamermesh's economic results, the effect was larger for women than for men.

Illustration by Brett Ryder

If looks could kill

What these results suggest is a two-fold process, sadly reminiscent of the biblical quotation to which the title of this article refers. There is a feedback loop between biology and the social environment that gives to those who have, and takes from those who have not.

That happens because beauty is a real marker for other, underlying characteristics such as health, good genes and intelligence. It is what biologists call an unfakeable signal, like the deep roar of a big, rutting stag that smaller adolescents are physically incapable of producing. It therefore makes biological sense for people to prefer beautiful friends and lovers, since the first will make good allies, and the second, good mates.

That brings the beautiful opportunities denied to the ugly, which allows them to learn things and make connections that increase their value still further. If they are judged on that experience as well as their biological fitness, it makes them even more attractive. Even a small initial difference can thus be amplified into something that just ain't—viewed from the bottom—fair.

Given all this, it is hardly surprising that the cosmetics industry has global sales of $280 billion. But can you really fake the unfakeable signal?

Dr Hamermesh's research suggests that you can but, sadly, that it is not cost-effective—at least, not if your purpose is career advancement. Working in Shanghai, where the difference between the ugliness penalty and the beauty bonus was greatest, he looked at how women's spending on their cosmetics and clothes affected their income.

The answer was that it did, but not enough to pay for itself in a strictly financial sense. He estimates that the beauty premium generated by such primping is worth only 15% of the money expended. Of course, beauty pays off in spheres of life other than the workplace. But that, best beloved, would be the subject of a rather different article.

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Mormons

From polygamy to propriety

Dec 19th 2007 | SALT LAKE CITY

America's next president might, conceivably, be a Mormon. What does that mean?

NEAR the edge of Temple Square in Salt Lake City is an unobtrusive statue of a man pulling a wooden handcart, with his family walking beside him. It commemorates a trek more gruelling than the tourists who gawp at it can imagine.

The early Mormons were not popular. They formed an exclusive, polygamous community with a militia and territorial ambitions. The governor of Missouri, Lilburn Boggs, called for them to be “exterminated or driven from the state”. Their prophet, Joseph Smith, was shot dead by a lynch mob in 1844. After his murder, his followers embarked on a great exodus.

Some set off in a wagon train and founded a city by the Great Salt Lake in what is now Utah. Others followed. The poorest of them pulled handcarts from Iowa to Salt Lake City—1,300 miles (2,092km) over wilderness and Rocky Mountains. Many died en route. At one point, 1,000 handcarters got stuck in the snow. Brigham Young, the prophet's successor, sent up a mule train from Salt Lake City to rescue them. He saved about 800, but the rest starved or froze to death.

The Church of Jesus Christ of Latter-Day Saints (to use its proper name) is arguably America's most important indigenous religion. It is a universal faith, but also “very American”, reckon Richard and Joan Ostling, authors of the excellent “Mormon America: The Power and the Promise”. Its history is entangled with America's. Like American settlers, Mormons were pioneers who travelled far for religious freedom. Like America, Mormonism has grown fast. Smith had 26,000 followers when he died. Now he has more than 13m, more than half of them outside America. And within America, by one estimate, Mormonism is the fourth-largest denomination.

As it has grown, it has moved towards the mainstream. Its leaders renounced polygamy in 1890. Its members, following Smith's view that the American constitution was divinely inspired, are patriotic and prone to public service. Mormons are also one of the best-behaved groups in America. Practising ones shun alcohol, cigarettes and even coffee. They work hard, marry, have lots of children and set aside an evening each week for quality time with the family. The 53,000 dark-suited, white-shirted, tie-wearing Mormon missionaries who fish for souls around the world can seem like America personified: earnest, friendly, optimistic, fond of Jesus and eager to tell you about it.

Yet many Americans have doubts about Mormonism. Only 53% of non-Mormon Americans think Mormons are Christian, despite the words “Jesus Christ” in the church's name. Many evangelical Protestants think them heretics—the ruder

Ruthless campaign

ones regularly heckle Mormon conferences. Some secular Americans voice the opposite complaint: that Mormons are too pious and too likely to knock on your door.

strategists now have an incentive to slander Mormonism

Antipathy towards Mormons is rarer among well-educated Americans (64% of college graduates have a favourable view of them) and among people who actually know a Mormon. But that still leaves a reservoir of suspicion. In a recent Pew poll, 25% of Americans said they would be less likely to vote for a presidential candidate who was a Mormon. Only Muslims and atheists fared worse.

And that could have political consequences, since one of the leading Republican contenders for the presidency in 2008 is a Mormon. Mitt Romney is otherwise a strong candidate. He is tall, handsome, clever and accomplished. His personal life is impeccable: at 60, he is still married to his high-school sweetheart. But he has a big black mark against him: his faith.

He tries to defuse the issue in three ways. First, he quotes John F. Kennedy, who said he was running for president not as a Catholic but as an American. Second, he draws attention to his wholesome private life. And third, he highlights the beliefs Mormons share with other Christians, such as that Jesus Christ is the saviour of mankind. This month he gave a speech on “Faith in America”, recalling the time, during the First Continental Congress of 1774, when British troops occupied Boston and someone suggested a prayer.

“There were objections. They were too divided in religious sentiments, what with Episcopalians and Quakers, Anabaptists and Congregationalists, Presbyterians and Catholics. Then Sam Adams [a revolutionary] rose and said he would hear a prayer from anyone of piety and good character, as long as they were a patriot. And so together they prayed, and together they fought, and together, by the grace of God, they founded this great nation.” Mr Romney won a standing ovation. But one of his rivals for the Republican nomination refuses to acknowledge that he is a Christian.

For Mormons, the Romney candidacy represents both a challenge and an opportunity, says Michael Otterson, a church spokesman. The surge of media interest gives them a chance to explain their faith to a large audience; but campaign strategists now have an incentive to slander Mormonism. David Magleby, a political scientist at Brigham Young University, suspects that evangelical churches might hold classes on “the cult of Mormonism” just before the South Carolina primary.

Reuters

Including about his faith

So what do Mormons believe? In the Bible, to the extent that it is “translated correctly”; and also in the Book of Mormon, a text that Joseph Smith said he found engraved on thin metal plates after an angel named Moroni showed him where to dig. The book reads like a pastiche of the King James Bible, and contains some startling theology. The story of its origins, however, raises sceptical eyebrows.

It was an ancient text, said Smith, in a language called “Reformed Egyptian”. He was able to translate it, he said, using a pair of “seer stones”. He worked in a room divided by a curtain, dictating to a scribe who never saw the plates. In all, eight people testified that Smith let them see and touch the plates. He later gave them back to the Angel Moroni, he said.

The Book of Mormon describes how Jesus came to the New World after his resurrection and preached to native Americans. Parts of the text are supposedly a contemporary account of events that took place

more than 1,500 years ago. Yet historians note various anachronisms, such as horses, steel and wheat. Neither the archaeological record nor any account besides the Book of Mormon suggests their presence in pre-Colombian America.

Most religions make extraordinary claims. What distinguishes Mormonism from more established faiths is that its founding revelations occurred quite recently. Perhaps because of this, they have been vigorously challenged. For example, in 1835, Smith bought some ancient Egyptian papyruses. One, he said, had been written by Abraham, the Jewish patriarch. He translated it and published it as the Book of Abraham. At the time, no one in America could read hieroglyphics, but when professional Egyptologists first saw facsimiles of Smith's papyrus, they recognised them as fragments from an ancient Egyptian Book of the Dead that bore no relation to his translation.

Critics dismiss Smith as a charming fraud. The Mormon church retorts that an ill-educated farm boy such as he could not simply have made up so sublime a work as the Book of Mormon. Ultimately, the best way to be sure it is true is to pray for guidance, advises the church's website.

Some liberal Mormons, unable to swallow the whole story literally, believe that Smith was divinely inspired but think it unimportant to dwell on the historical details surrounding his revelations. Some sympathetic non-Mormons also admire him. Harold Bloom, a literary critic, describes Smith as “an authentic religious genius, unique in our national history.” Mark Twain, less charitably, called the Book of Mormon “chloroform in print”.

The church Smith started is strictly hierarchical. At the top is the president, who is considered a prophet. Advising him are two other members of the “First Presidency”, beneath which are 12 apostles. Appointments to the top ranks of the church are for life. Since Mormons have few unhealthy vices, their leaders are typically very old: Gordon Hinckley, the current president, is 97.

At lower levels, the church is run by lay volunteers, so it has lower running costs than churches with salaried clergy. Since good Mormons tithe—that is, they give a tenth of their income to the church—the church is colossally wealthy, though its finances are secret. A decade ago, the Ostlings estimated its assets at $25-30 billion, but who knows? What is certain is that it owns several companies (in publishing, food-processing and other wholesome areas), spends a fortune helping the victims of floods and famine, and builds new temples at an impressive clip.

The church believes in “continuous revelation”, so its doctrines can evolve. Take polygamy. Smith had at least 28 wives. He said polygamy was God's will. The rest of America was horrified. In 1887 Congress passed a law to dissolve the Mormon church. In 1890 the Supreme Court upheld it. Shortly afterwards, the church's fourth president banned polygamy. Within six years, Utah had won statehood.

A more recent revelation concerned race. The very early Mormons were quite liberal for their time: their neighbours in Missouri complained that they did not own slaves. But Mormon scriptures say some harsh things about dark-skinned people and until 1978 blacks were barred from the priesthood, which, in Mormon parlance, includes more or less any devout male over the age of 12. This rule made it tough to win converts in, say, Brazil, let alone Africa. But in 1978 a new revelation revoked the colour bar.

Asked why the bar ever existed, Russell Ballard, an apostle, says simply: “We don't know.” Elder Ballard is pleased that the church is now more open: he gushes about its growth in Ghana and Nigeria. And though Smith said God told him that other churches were “all wrong”, Elder Ballard is more tactful. Christians from other churches can keep everything they have, he says, but if they become Mormons they will get something extra. He stresses the good relations Mormons enjoy with other churches, and the values they share. An amiable father of seven and grandfather of 43, he is keen to talk about the need to preserve the traditional family as American morals crumble.

Getty Images

A Mormon marriage, if performed in a temple, is eternal. Husband and wife are reunited in heaven, along with their extended family. This view of kinship helps explain why Mormons are so interested in genealogy. They like to find out who their ancestors were so they can perform a baptism for them, and give them the option of becoming Mormons posthumously.

The church's Family History Library in Salt Lake City has the largest collection of genealogical data in the world. Mormon researchers have amassed 2.4m rolls of microfilm of births, deaths and marriages. They collect Chinese clan records and transcribe African oral genealogies. (They used to do baptisms for Jewish Holocaust victims, but stopped when living Jews complained.) Visitors to the centre can research their own ancestry, or simply admire the industry that went into discovering that Brigham Young is George Bush's fifth cousin, five times removed.

Wedded as they are to traditional mores, Mormons tend to vote Republican. Not always: the leading Democrat in the Senate, Harry Reid, is a Mormon. And the church is careful to remain politically neutral, except on what it calls moral issues. (It opposes gay marriage, for example.) But still, the typical Mormon congressman is Chris Cannon, a Utah Republican whose district has the highest number of children of any in the country. The American Conservative Union gives him a 100% rating. His views on the family are pretty much the opposite of those of Nancy Pelosi, the top Democrat in the House of Representatives, whose San Francisco district has the lowest number of children. But Mr Cannon's conservatism is nuanced: he supports more welcoming immigration laws even if it hurts him politically.

Many Mormons like the idea that one of their own might become president. But some have mixed feelings. Ryan Decker, an economics student at Brigham Young, frets that Mormon missionaries abroad are already often seen as somehow representative of American foreign policy. With a Mormon in the White House, that confusion would be harder to dispel.

That would matter, because so many Mormons go on missions for a couple of years. Among the devout, especially men, it is expected. They work in pairs, partly for safety, partly to keep each other in line. Missionaries must live simply, rise early and follow an arduous regimen of prayer, study and accosting strangers. Some find it tough; others, formative.

Stephen Covey, a self-help guru whose book “The Seven Habits of Highly Effective People” has sold 15m copies, went to Britain as a missionary when he was 20. “It helped me learn how to speak in public and interact with an audience,” he says. He held meetings that sometimes drew hundreds, he recalls. Mitt Romney was less successful. As a missionary in France, he won “no more than a handful” of converts, he told a biographer, Hugh Hewitt.

A century and a half ago, relations between Mormons and their neighbours were often bloody. Now, they are pretty good. Sober, diligent, nice people are hard to hate. To find tensions between Mormons and non-Mormons, you have to go where the two groups compete for power.

Getty Images

Ironically, Mormonism's Mecca is such a place. Mormons are no longer a majority in Salt Lake City: with large families, they tend to live in the suburbs. So the city now has a non-Mormon mayor, Rocky Anderson. He says that relations between the two groups are “quite strained”. Thanks to a Mormon-dominated city council, drinking laws are finicky. If you want to booze without eating, you can either buy extra-watery beer or join a private club.

The mayor cites a long-running dispute with the church over public access to a block in the centre of town that it bought from the city a few years ago. Tempers have erupted over this, but not fist-fights. Mr Anderson also complains that the church opposes gay rights. That is a big problem for gay Mormons, but less so for gay gentiles with Mormon neighbours. Salt Lake City has been rated one of the 51 “fabulous” places to be gay in America.

Tensions exist within the church, too. Some Mormons find the rules hard to live by. Others find the hierarchy stultifying. Paul Toscano, a lawyer who was excommunicated for criticising church leaders, says that 19th-century Mormonism was to religion what Bach is to music: complex and rich. Now, he says, the church is run by corporate types, not theologians, and its teachings have become simple and bland, “like people dancing the polka”.

Some Mormons just focus on what one might call “cultural Mormonism”—clean living and family values—while glossing over what the scripture actually says. Mr Toscano recalls that, when he was a young man about to go on his mission, he mentioned to his bishop (roughly the equivalent of a parish priest) that Joseph Smith was a polygamist. The man's face froze in genuine surprise. He said he could not let Mr Toscano go on a mission spreading false doctrine. “He was an idiot,” says Mr Toscano of his former bishop.

The biggest threat to the church's image comes from the hundreds of sects that have splintered from it. The most notorious is led by Warren Jeffs, who ruled a remote town on the Utah-Arizona border like a priest-king until he was arrested last year for abetting the rape of an under-age girl, whom he had ordered to marry her cousin.

Mr Jeffs told his followers that men could go to heaven only if they had multiple wives. So there were never enough women to go around, and Mr Jeffs started expelling adolescent boys for minor offences. Hundreds of these “Lost Boys” now live in the nearest towns. They can usually earn a living, having typically worked on building sites since they were ten.

Kevin (he won't give his surname) says he was thrown out of the sect two years ago, when he was 17, for “playing video games, stuff like that”. He now realises that Mr Jeffs's teachings were “crap”. He split families. One day he might judge a man unworthy of his wives and children and give them all to another man. He banned television, but Kevin's dad hid theirs in the closet. Kevin did not watch Mr Jeffs's trial, but says: “I hope they convict him of something.” They did: he got ten years to life.

Mainstream Mormons are sometimes confused with such groups. But the better they are known, the less often it happens. Mr Romney might help scotch the association with polygamy: unlike nearly all the other serious Republican presidential candidates, he has had only one wife.

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Counting people

Census sensitivity

Dec 19th 2007

AFP

Numbers mean power, which is why counting people is so controversial

“GO, NUMBER Israel from Beersheba even to Dan; and bring the number of them to me, that I may know it.” It was not the first census described in the Bible, nor the last, nor yet the most renowned. But for reasons that are obscure, King David's order to Joab, the commander of his army, went against God's will and both men knew it. The count was carried out all the same, and was followed by a heavy punishment: 70,000 Israelites died of the plague before the Lord relented and accepted burnt offerings as a token of David's repentance.

Taking a census thus came to be known as the sin of David, and was long regarded as best avoided. In 1634 Governor John Winthrop of the Massachusetts Bay Colony estimated the local population rather than counting it exactly, telling a correspondent: “David's example stickes somewhat with us.” And when a Census Bill was debated in Britain in 1753, Matthew Ridley, the member of Parliament (MP) for Newcastle, gave a speech saying that there was among the people “such a violent spirit of opposition to this Bill, that if it be passed into a law, there is a great reason to fear, they will in many places oppose the execution of it in riotous manner.”

But nobody needed David's dreadful example to persuade them that censuses were a bad idea. From the point of view of those being enumerated, nothing good could come of being counted. The usual reasons for wanting the numbers were war and taxes. From the sovereign's point of view, such information was crucial: the decision to go to war could be taken only once it was known how many men could be conscripted and how much money levied. So the results were highly sensitive, and an enemy country's numbers would be useful when deciding whether attacking it was prudent, and conquering it worthwhile. The results of a Swedish census in the mid-1700s appear to have been made a state secret because of such fears.

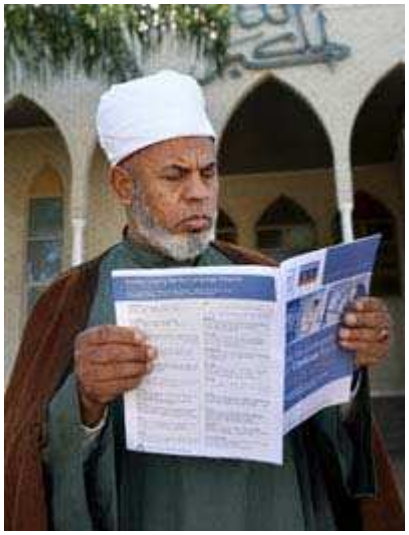
But at the same time men were becoming enamoured of numbers and taking to counting as a way of answering pressing questions of their own. Following the London plague of 1603, weekly Bills of Mortality began to be published, listing all the deaths in the city and, from 1629, their causes. According to John Graunt, whose 90-page book interpreting and drawing conclusions from these bills is generally regarded as the earliest statistical analysis, they were used by the rich to “judge of the necessity of their removall” and by tradesmen to “conjecture what doings they were like to have”. And in 1731 Benjamin Franklin published in the *Pennsylvania Gazette*, the newspaper he edited at the time, an account of all the ships that entered and left the big northern colonial ports, together with their destinations, so that the reader could “Make some Judgment of the different Share each Colony possesses of the several Branches of Trade”.

It was revolution that renewed the impetus for rulers to count their people. The American war of independence brought a new nation into being, and it was not only one that was made up of separate states, each keen to get full credit for its relative size, but also one whose population was on the move. In order to decide how many representatives each state should send to the new Congress, there was only one thing for it: their populations would have to be counted, and that count would have to be repeated regularly.

America's first census was carried out in 1790, and it was groundbreaking in many ways. It was the first to be mandated in any country's constitution. It was also the occasion for America's first presidential veto, exercised by George Washington on the advice of Thomas Jefferson, whom he had asked to examine the proposals for sharing out congressional seats between the states. Jefferson—a man so fond of enumeration that he once wrote to a friend that he had “ten and one-half grandchildren, and two and three-fourths great-grandchildren”, and that “these fractions will ere long become units”—criticised them for being unclear about how this “apportionment” was to be carried out. He advised Washington that a completely unambiguous method should be chosen and enshrined in legislation.

The fact that this thriving new nation counted its citizens without provoking divine retribution may have given courage to other Christian countries. Over the following decade Denmark, England, the Netherlands, Norway and Sweden all instigated regular censuses of their own.

AFP



They want to know what?

People started finding the sorts of patterns in the resulting data—life expectancies, crime rates, causes of death, and the mix of religions and races—that are now part of our familiar mental furniture. In the 1800s, for instance, two French statisticians, André Michel Guerry and Adolphe Quetelet, analysed the tables of crimes against individuals and property that had recently started to be published. They were astonished by the hitherto-unsuspected regularities they found. Guerry was particularly struck by the fact that the method by which someone committed suicide could be predicted from his age. The author of an English commentary on his work described his findings thus: “The young hang themselves; arrived at a maturer age they usually blow out their brains; as they get old they recur again to the juvenile practice of suspension.”

Quetelet was equally amazed by the regularity with which the various types of crime were committed. “We can enumerate in advance”, he wrote, “how many individuals will stain their hands in the blood of their fellows, how many will be forgers, how many will be poisoners, almost as we can enumerate in advance the births and deaths that should occur.” Such regularities, he claimed, left no role for free will in human affairs. “Society prepares the crime”, he wrote in 1832, “and the guilty person is only the instrument.”

Opposition to this line of thinking came from Charles Dickens, who loathed all arguments based on numbers and averages, charging that they were used to legitimise indifference to other people's suffering. His strongest broadside against those who thought that counting people was a good way to answer social questions came in his novel “Hard Times”. When Tom, the hard-hearted Gradgrind's son, is found to be a thief, he uses his father's statistical determinism to shrug off responsibility. “So many people, out of so many, will be dishonest. I have heard you talk, a hundred times, of its being a law. How can *I* help laws? You have comforted others with such things, father. Comfort yourself!”

The future, though, belonged to those like another ardent social reformer, Dickens's near-contemporary, Florence Nightingale (see article). Best remembered for nursing wounded soldiers in the Crimean war, her sanitary reforms were based on meticulous records of hospital admissions, illnesses, treatments and outcomes. Rather than painting moving pen-portraits of soldiers left to rot on stinking, louse-ridden pallets in a hospital built on an open sewer—as Dickens would no doubt have done—she used death rates to campaign, successfully, for change.

Nowadays, a census is part of the standard equipment of a functioning state. In 1995 the UN called for all member nations to hold a census in the following decade. Yet counting people remains a sensitive business for two reasons, connected with the ambiguous character of government. Where government is oppressive, people want to keep out of censuses, lest information they provide is misused. Where government provides, people want to be in censuses, and to boost their numbers, in order to claim a larger share of the goodies.

Include me out

History offers good reason for worrying about the misuse of information. The Nazis used population records to round up Jews into concentration camps. As a result, Germans are still prickly about being counted. When in the 1980s their government added new questions to the census, there was a public outcry and the constitutional court struck it down on the grounds that it conflicted with a “fundamental right to informational self-determination”. Although the country is planning a census in 2011—its first since reunification—it will not be a full count, but only a sample. Respondents' surnames will be deleted as soon as possible and all data that could identify an individual will be erased once statisticians have finished with them. Questions on race and religion will not be included.

Getty Images

Fears that the data might be used for purposes other than the declared ones may have undermined China's most recent census in 2000. This involved 6m enumerators visiting around 350m households in just ten days. They asked some rather personal questions, such as “How much did you pay for your home?” and “How often do you wash?” But it was the standard ones about the number of residents in each household and their sex and age that provoked the most anxiety. The government wanted to find out whether the country's gender imbalance was primarily due to the abortion and infanticide of females, or whether many of the missing girls were in fact alive and being concealed. To encourage parents to register over-quota children, it reduced the penalties for anyone found to have flouted the one-child law. Some also contend that large numbers of peasants who migrated illegally to the big cities will have hidden from the enumerators, and that there may be as many as 100m uncounted Chinese on top of the 1.3 billion the census found.

It isn't just oppressive governments that misuse information. In early 2007 researchers found proof of what had long been suspected: that during the second world war the American census bureau had played a part in the internment of Japanese-Americans by passing some of their names and addresses to the secret service.

Other people's money

In autocracies, people try to keep out of censuses. In democracies, by contrast, they want to be in them, for censuses mean numbers, and numbers mean money and power. The American census, for example, determines how around $200 billion a year of federal funds is shared out, for everything from education and welfare to highways. Such rich pickings mean that censuses are well worth fighting over.

Although Jefferson ensured the American states could not squabble about the formula used for apportionment, he could not have predicted the partisan rows about how to deal with undercounting. No census counts everyone, and the uncounted are not drawn uniformly from all walks of life. The poor, the homeless, immigrants and ethnic minorities are missed more often. The 1990 census is thought to have missed one native American in eight.

Imaginechina

The statisticians' solution is to follow each census with a quality check, surveying representative areas to create a picture of those overlooked in the full count and correcting the figures accordingly. Perhaps unsurprisingly, in light of the profile of those most likely to be missed, Democrats find the intellectual arguments in favour of

such adjustment more compelling than Republicans do. Before the census in 2000, the Supreme Court ruled that sampling-adjusted figures could not be used for apportioning congressional seats. But the row over whether they should be used to share out cash raged until 2001, when the census bureau finally declared the raw figures good enough to stand unaltered.

In Britain the 2001 census was corrected using such sampling techniques, but some areas still complain that they are being undercounted. In the decade between censuses, the national statistical office updates the figures with estimates of external and internal migration. Some towns with lots of foreigners are convinced that large chunks of their population are being overlooked, losing them millions of pounds of government money. The MP for Slough, a town to the west of London full of Poles, poetically told Parliament in January that the increasing “amount of shit that goes through our local sewers” was evidence that her constituency was being sold short.

Some groups are begging to be counted because they hope to prove their importance and increase their influence with government. Church leaders in Britain were gratified when the 2001 census, the first to ask about religion, found that 70% of the population identified themselves as Christian. They reckoned this was a large enough majority to justify their religion's special place in state-run education. Whether the figures bear the weight that has been put on them is, however, questionable. Church attendance figures suggest that few of these self-identified Christians attend services more than once a year, or indeed at all. And the irreverence with which some respondents treated the question can be judged by the 390,000 people—0.7% of the population—who answered it by claiming to be Jedi.

Dashed hopes of gaining a higher profile caused despondency among gay and lesbian groups when it was decided not to add a question about sexual orientation to Britain's next census, to be held in 2011. Government statisticians were keen, but they were stymied by the difficulties of phrasing a question that would neither offend people nor leave them in the dark about what was being asked. They were mindful of the reaction to a question on self-perceived sexual identity in a recent survey by the Metropolitan Police. The most common query it provoked from respondents was: “What's heterosexuality?”

Some groups are begging to be counted to prove their importance and increase their influence

That British gays wanted to stand up and be counted says much for national tolerance. It is hard to imagine the same happening in Nigeria. There, the dispute is about who will get the oil money. The country has not had an uncontested census since gaining its independence in 1960. Civil war and poorly trained enumerators have been formidable obstacles to a reliable count. The most recent census, in 2006, omitted questions about religion and tribe following demands from leaders in the largely Muslim north. Christians in the south, who believe they have been undercounted in the past, threatened a boycott unless the questions were asked. The census found 140m people: 75m in the oil-poor north and 65m in the revenue-poor south. Politicians in the north endorsed the figures; those in the south did not.

In India, the arguments are not about money, but about a different sort of resource: the jobs and university places handed out under the government's affirmative-action programme. Many *dalits*, or untouchables, have tried to escape the discrimination they face in Hinduism by converting to Christianity or Islam. But this means no longer being eligible for the programme—a restriction on religious freedom, say some, and indeed court challenges are wending their way through the system. Rather than being neutral in this dispute, the census form took sides by allowing respondents to indicate their caste as *dalit* only if they claimed to be Hindu, Sikh or Buddhist.

The shakier the state, the fiercer the rows about censuses, for numbers affect how power is distributed. In Iraqi Kurdistan, for instance, a census due to happen in 2007 was delayed. It was intended to correct figures distorted by Saddam Hussein's “Arabisation” programme, which forced many Kurds to leave and others to declare themselves Arab. If and when an Iraqi census happens, it will not only give a truer picture of the ethnic mix in a contested region, but will also have consequences for billions of dollars in oil revenues.

Lebanon has not held a census since 1932, when it counted the number of adherents to various religions in order to share out power under a system known as confessionalism. Since that time its demography has changed and the politically favoured Christians are now believed to be in a minority. Plenty of powerful people are keen to keep that quiet, so the prospects for a new official count are dim.

Counting can be even more dangerous than being counted. In 1936 Stalin told his officials that the following year's census would find a total population of 170m—a figure that took no account of his slaughter of millions in famines and purges. But the enumerators found only 162m people, and also revealed other unwelcome facts, including that nearly half the population of this avowedly atheist country was religious. So Stalin denounced the count as a “wrecker's census” and had the census takers either imprisoned or shot. A new count in 1939 came up with a similar total, but this time officials wisely classified the results and gave Stalin his figure of 170m.

That Stalin insisted on this charade is a backhanded testimony to the way counting introduces people to themselves. “The interest and significance of the census for the community lie in this,” wrote Leo Tolstoy of the Moscow census of 1882: “that it furnishes it with a mirror into which, willy nilly, the whole community, and each one of us, gaze.” The faces that look back can surprise us still.

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Charts

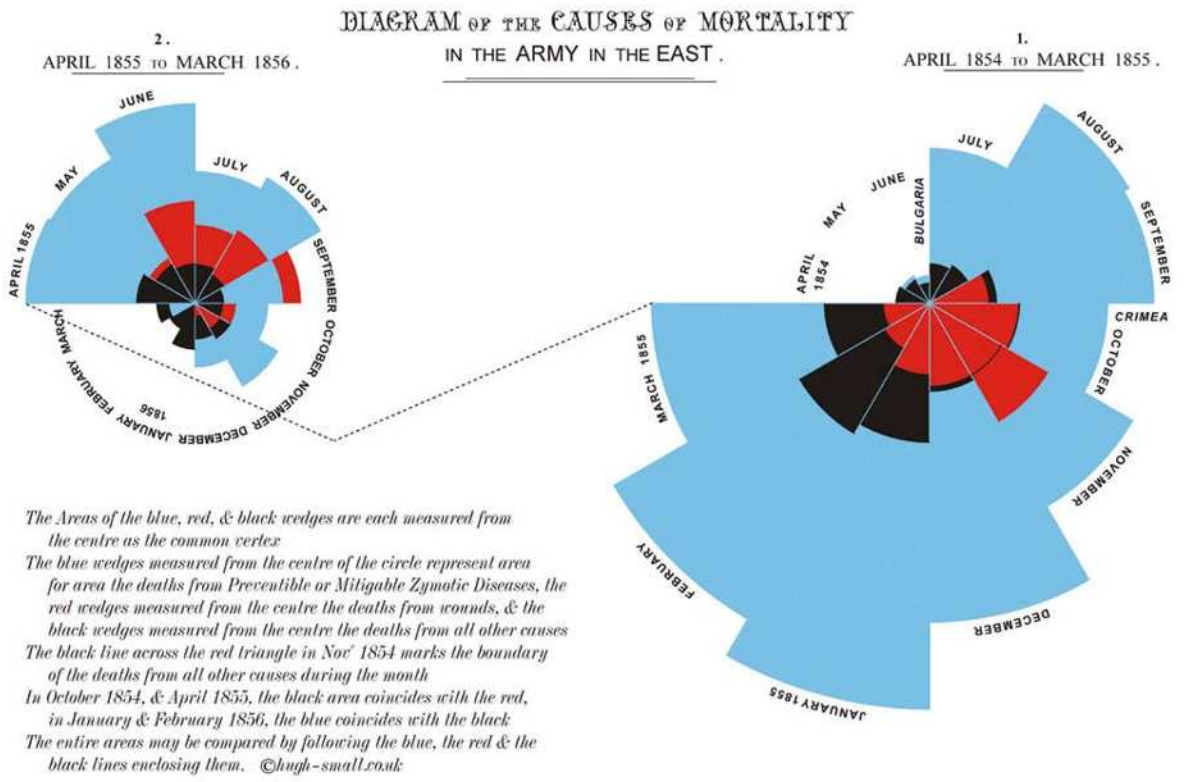
Worth a thousand words

Dec 19th 2007

A good graphic can tell a story, bring a lump to the throat, even change policies. Here are three of history's best

IT WAS at a dinner party in 1856 that Florence Nightingale met William Farr. The Lady of the Lamp was already famous for nursing British soldiers wounded in the Crimea; Farr, the Compiler of Abstracts in the General Registry Office, was widely recognised as an innovative statistician. Both cared deeply about improving the world through sanitation; both understood the importance of meticulous records in providing the evidence needed to bring about change.

Graphic News

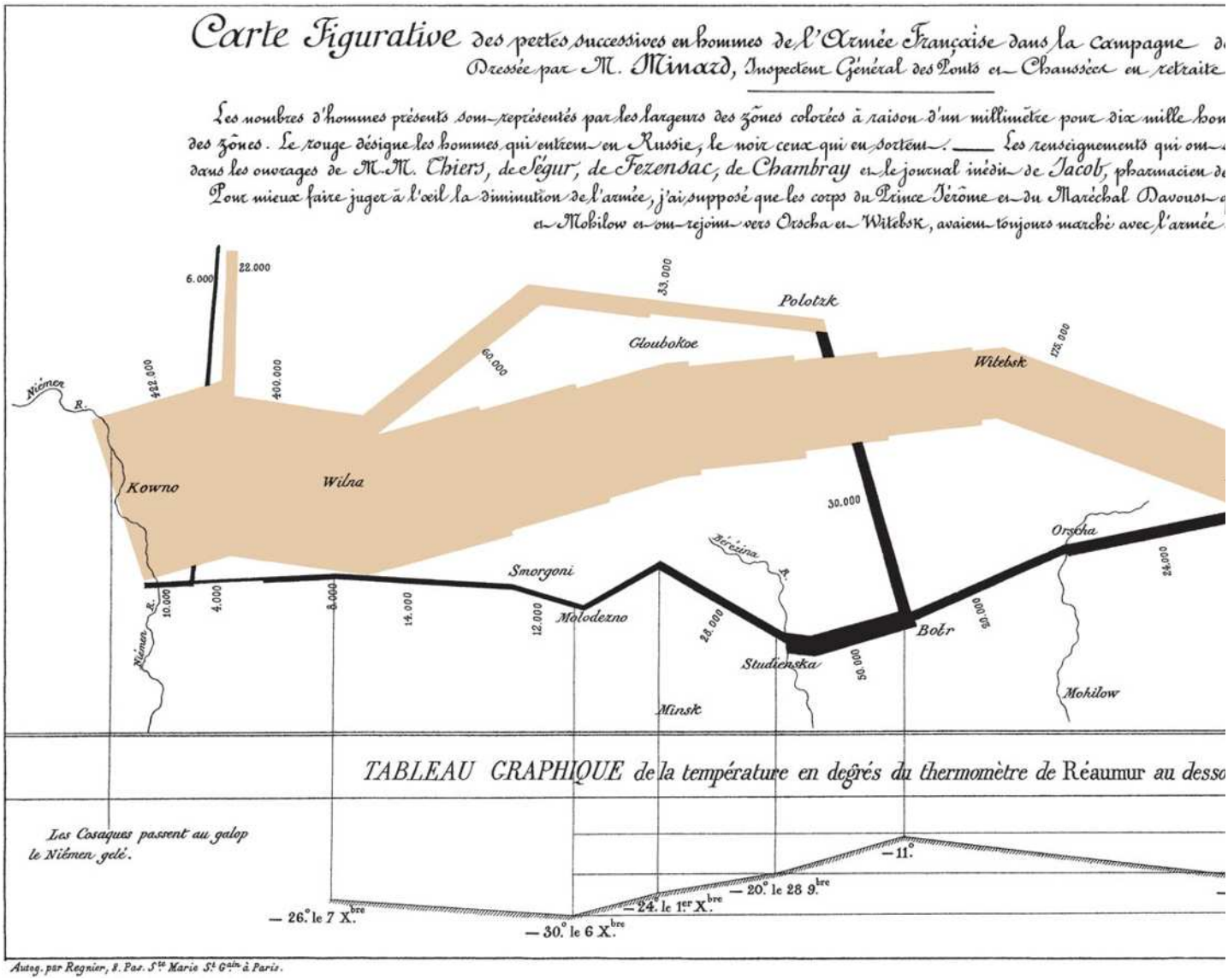


Farr was the first to compile "mortality tables", listing causes of death in the general population; Nightingale compared his numbers with her own on the deaths of soldiers to great effect. By showing that even in peacetime a soldier faced twice the risk of dying in a given year as a civilian, she campaigned successfully for better conditions in barracks. The pair were instrumental in setting up a royal commission of inquiry into sanitary conditions during the Crimean war.

Although remembered as the mother of modern nursing, Nightingale was an accomplished statistician too. She was particularly innovative in presenting data visually. The example above, of a type now known as "Nightingale's Rose" or "Nightingale's Coxcomb", comes from her monograph, "Notes on matters affecting the health, efficiency and hospital administration of the British army" published in 1858. In the same year she became the first female fellow of the Statistical Society of London (now Royal Statistical Society).

The chart displays the causes of the deaths of soldiers during the Crimean war, divided into three categories: "Preventible or Mitigable Zymotic Diseases" (infectious diseases, including cholera and dysentery, coloured in blue), "wounds" (red) and "all other causes" (black). As with today's pie charts, the area of each wedge is proportional to the figure it stands for, but it is the radius of each slice (the distance from the common centre to the outer edge) rather than the angle that is altered to achieve this. Her principal message—that even during periods of heavy fighting, such as November 1854, far more soldiers died from infection than from wounds—can be seen at a glance. She sent the chart to the War Office; and it is a fair assumption that it contributed to the improvements in military hospitals that she brought about.

Nightingale's chart is a beautiful and persuasive call to action, but it is not perfect. The red, black and blue wedges are all measured from the centre, so some areas mask parts of others. The numbers of deaths from the various causes are not stated—although, to be fair, it was their relative size that Nightingale wished to show.

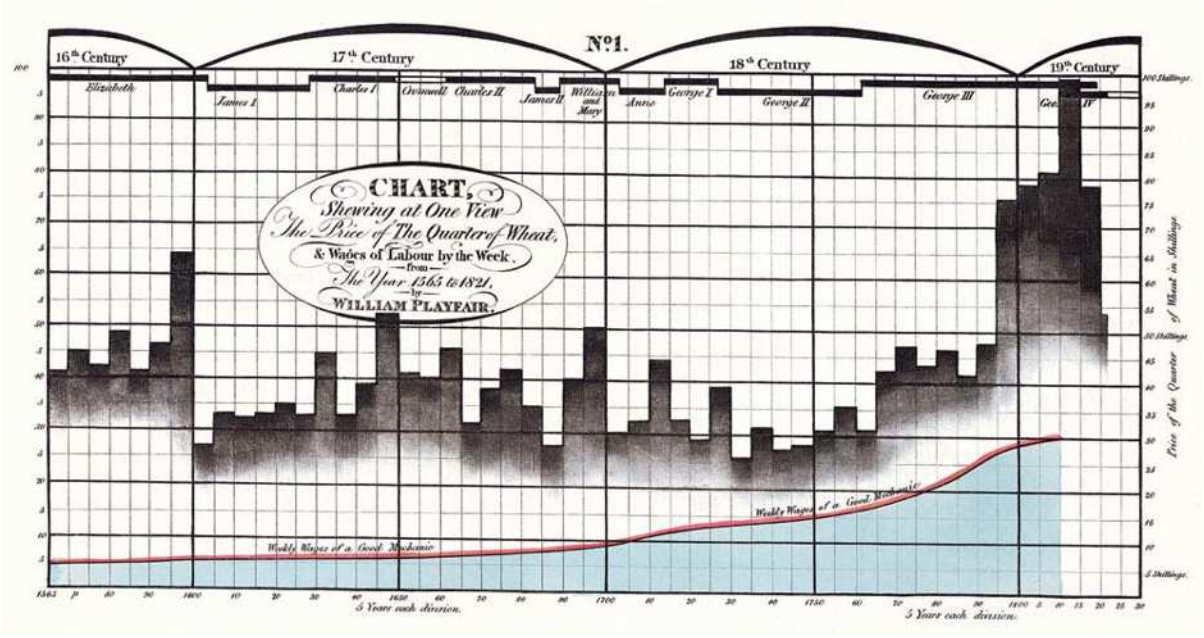


The chart to the left also tells the story of a war: Napoleon's Russian campaign of 1812. It was drawn half a century afterwards by Charles Joseph Minard, a French civil engineer who worked on dams, canals and bridges. He was 80 years old and long retired when, in 1861, he called on the innovative techniques he had invented for the purpose of displaying flows of people, in order to tell the tragic tale in a single image. Edward Tufte, whose book, "The Visual Display of Quantitative Information" is a bible to statisticians, calls it "the best statistical graphic ever drawn".

Minard's chart shows six types of information: geography, time, temperature, the course and direction of the army's movement, and the number of troops remaining. The widths of the gold (outward) and black (returning) paths represent the size of the force, one millimetre to 10,000 men. Geographical features and major battles are marked and named, and plummeting temperatures on the return journey are shown along the bottom.

The chart tells the dreadful story with painful clarity: in 1812, the Grand Army set out from Poland with a force of 422,000; only 100,000 reached Moscow; and only 10,000 returned. The detail and understatement with which such horrifying loss is represented combine to bring a lump to the throat. As men tried, and mostly failed, to cross the Bérézina river under heavy attack, the width of the black line halves: another 20,000 or so gone. The French now use the expression "C'est la Bérézina" to describe a total disaster.

In 1871, the year after Minard died, his obituarist cited particularly his graphical innovations: "For the dry and complicated columns of statistical data, of which the analysis and the discussion always require a great sustained mental effort, he had substituted images mathematically proportioned, that the first glance takes in and knows without fatigue, and which manifest immediately the natural consequences or the comparisons unforeseen." The chart shown here is singled out for special mention: it "inspires bitter reflections on the cost to humanity of the madnesses of conquerors and the merciless thirst of military glory".



The chart to the left is the earliest of our three. It was published in 1821 by William Playfair, a Scottish engineer, political economist and scoundrel: he was convicted of libel in England and swindling in France. Alongside these many and varied skills he was also an engraver (he produced some of James Watt's engineering drawings), which explains this image's handsomeness, with its delicate shading and ornate attribution.

Playfair liked controversial topics. He drew a chart comparing tax levels in various countries in order to show that Britain's was too high. He was the first to show imports and exports on one chart, shading the area between the two to indicate the balance of trade and explaining that the intersection of the lines showed a shift in favour of one country or the other.

This chart, his most famous, shows the “weekly wages of a good mechanic” and the “price of a quarter of wheat”, with the reigns of monarchs displayed along the top. It is a little difficult to see the point Playfair wished to make: “that never at any former period was wheat so cheap, in proportion to mechanical labour as it is at the present time”. Presumably he was not familiar with the idea of combining two variables—prices and wages—to make a third—affordability. Still, he should not be overly criticised for this. For a start, his conclusion was correct. Statisticians have used his data to plot wages divided by prices (showing how much wheat a week's wages would buy) against time, and the point becomes clear—as, incidentally, does a more subtle one: the increase in buying power was slowing down.

And Playfair was already making a leap of abstraction that few of his contemporaries could follow. Using the horizontal and vertical axes to represent time and money was such a novelty that he had to explain it painstakingly in accompanying text. “This method has struck several persons as being fallacious”, he wrote, “because geometrical measurement has not any relation to money or to time; yet here it is made to represent both.”

He was the first in a series of economists, statisticians and social reformers who wanted to use data not only to inform but also to persuade and even campaign—and who understood that when the eye comprehends, the heart often follows. Nightingale hoped her charts would liven up her publications; the queen, she thought, might look at the pictures, even if she did not read the words.

Not everyone thought it was right to include such fripperies in a sober publication. “We do not want impressions, we want facts,” Farr wrote to her in 1861. “You complain that your report would be dry. The dryer the better. Statistics should be the dryest of all reading.” Fortunately, she ignored him.

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American spirituality

Where “California” bubbled up

Dec 19th 2007 | ESALEN, BIG SUR

Esalen, birthplace of the New Age, is a victim of its own success

Getty Images

THE notion that America spends its leisure time praying at evangelical megachurches is widespread; but the United States is a diverse country, and many of its people get their spiritual nourishment elsewhere. Some of them are in yoga studios, wearing prAna-branded stretch pants and chanting “Om”. Others are in spas and retreats, getting exotic massages; queuing at the Ayurvedic and Chinese-medicine counter at, say, Elephant Pharmacy in Berkeley; in psychotherapy sessions, to improve themselves or their marriages. If asked about their faith, many would answer that they are “spiritual, but not religious”.

That may sound daft to both theists and atheists; but it comes from a deeply American cultural tradition—one that has, if one can call it that, its own Mecca or Vatican. This is a place called Esalen. It is in California, unsurprisingly, and consists of 120 acres of spectacular gardens on a dramatic cliff on the Big Sur coastline just south of the Monterey peninsula. Its altar or central shrine, as it were, is a bath built into the cliff, where hot and healing water bubbles out of a geothermal spring into baths that offer the world's best in-tub views. Here the worshippers give and get massages au naturel, at any hour of the day or night.

The Esalen Institute calls itself “an alternative educational centre devoted to the exploration of the human potential”. Depending on the observer, it is also a lot of other things. For about 10,000 people a year—about a quarter of them foreign, especially German and Swiss—it is a place not only to bathe naked but also to take seminars with titles such as “Humour and Other Martial Arts”, “Science and Spirituality” and “Healing the Pelvic Floor”.

For invited experts only, Esalen is also a “centre for theory and research” that explores topics such as the “survival of bodily death”. As such, it is a “meeting place and platform for disseminating ideas”, as Michael Murphy, Esalen's 77-year-old co-founder and chairman, puts it.

For many others in America and around the world, Esalen stands more vaguely for that metaphorical point where “East meets West” and is transformed into something uniquely and mystically American or New Agey. And for a great many others yet, Esalen is simply that notorious bagno-bordello where people had sex and got high throughout the 1960s and 1970s before coming home talking psychobabble and dangling crystals. In short, Esalen is in every way, even geologically, California at its most extreme. It is its caricature, as well as its noblest expression.

Esalen is named after the Esselen, a now-extinct Indian tribe that used the place as their burial ground.

In 1910 the Murphy family bought the land from homesteaders, but it was almost impossible to reach until work crews blasted a highway past it in the 1930s. It soon drew risqué rebels of every sort. John Steinbeck and Aldous Huxley spent time there. Henry Miller, whose “Tropic of Cancer” was banned for obscenity, did his laundry and much else at the Esalen springs.

In the 1950s, the Beat poets came from San Francisco and brought women and books about Tantra. Mingling easily were scholars such as Alan Watts, a bon vivant and expert on Taoism and Zen Buddhism. Then came anarchists, hippies and drugs. Mr Murphy and his co-founder, Richard Price, came down in the early 1960s and created the institute. Their different but complementary personalities would soon turn the place into a phenomenon.

Mr Murphy was an Irish-American Episcopalian altar boy who had, in 1950, stumbled into the wrong classroom at Stanford University. A German professor, Frederic Spiegelberg, was lecturing on eastern religions. “Wake up! The Brahman is the Atman,” Mr Spiegelberg was shouting at the top of his lungs, and Mr Murphy ceased being an altar boy at that instant.

Mr Price, who studied psychology at Stanford, and also found himself in courses by Mr Spiegelberg and Mr Watts, had had psychological problems. His father forced him into a mental institution, where—this being the 1950s—he received insulin injections and electric shocks that damaged his health for ever. The experience traumatised him. He eventually broke with his family and escaped to San Francisco, where he met Mr Murphy in a meditation workshop in 1960.

Eslan Institute

Richard Price and Michael Murphy; getting in touch

Together they made Esalen into their ideal human dwelling and thus, in stages, created the Californian way of life as the world understands it. First, both admired Mr Spiegelberg, and in particular his 1948 book “The Religion of No Religion”. Messrs Murphy and Price would translate that into “no one captures the flag”, a phrase heard at Esalen to this day which means that every religion, fad and idea has equal access as long as it does not try to exclude or dominate the others. In practice, this ruled out the Abrahamic religions, but welcomed Yogic and Vedic philosophy, Zen Buddhism and Taoism, which are non-theistic and easy-going about orthodoxy.

Eslan Institute

A tub with a view; Fritz Perls and friend; George Harrison and Ravi Shankar

But Messrs Murphy and Price didn't want to import the Asian traditions wholesale. Mr Murphy had hated the conservative and hierarchical society that he saw in India, which Mr Price compared to his totalitarian experience in the mental asylum. They wanted to mix Eastern spirituality with Western individualism, democracy, science, openness, and optimism. In particular, they liked Huxley's idea about “human potentialities”, and adopted the term.

From the outset, Esalen's mission was therefore high-minded. Mr Murphy says that his hope was always to unite the two separate historical enlightenments, “the European one, with Voltaire, which the Germans call *Aufklärung*” and “the Asian one, around Samadhi, which the Germans call *Erleuchtung*.” Out of the synthesis would come a uniquely American enlightenment, in the tradition of Emerson and Thoreau, a cheerful union of intellect and spirit, body and soul.

This—specifically the bit about the body—soon presented a predictably Californian problem. The fancy Asian way of putting the Esalen vision was the word Tantra, a strand in Eastern philosophy that considers the physical world not an illusion to be overcome but a vehicle to reach the divine. Mr Murphy, for instance, has always seen golf as a form of meditation, a notion that in 1972 he turned into a bestselling book, “Golf in the Kingdom”. “My passion was for self-cultivation that involves discipline” as opposed to “letting it all hang out,” he says. “Curiously, what happens around the world with Tantra also happened at Esalen.”

As a long-time friend of Esalen, who participated at the time, recalls, “that Tantric stuff in the books was all about people fucking their brains out in the baths.” Often with drugs to add oomph. Mr Murphy was disgusted. He decided to clean the place up. One night in 1961, thereafter known as “the Night of the Dobermans”, Messrs Murphy and Price, with a few others, including the folk singer Joan Baez, who was living in one of the cabins, walked three Doberman pinschers down the dirt path to the baths, where a mob of San Francisco gays was having an orgy. The orgiasts scurried off hastily.

Time Life Pictures

Bongo drums and massage

That didn't end the tension, however. Yes, the grounds were now safe again for meditating yogis, shamans and such. But the cerebral and ascetic, or “Apollonian”, aspect of the activities always had competition from the sensual and indulgent, or “Dionysian”, side. For a time, Esalen even had its own venereal-disease clinic.

The drugs were also a problem. Mr Murphy was informed that California's state government had placed agents on the grounds. He went to the bureaucracy and discovered that he was an “innkeeper” and thus liable. He put up a No Drugs sign, and kicked out any known dealers. Still, “we knew that at half of the seminars everybody was stoned,” he says. A course on “drug-induced mysticism” remained one of the most popular offerings. There were casualties, including several suicides that involved drugs.

This tension between what Jeffrey Kripal, the author of “Esalen: America and the Religion of No Religion”, calls the “right hand” and the “left hand” of Esalen Tantra remains to this day. On the right, or intellectual and disciplined, hand, all forms of mysticism and spirituality are erotic, but abstractly so. Taoism, for instance, is based on the attraction of *yin* and *yang*, female and male, electron and positron. On the left, or sensual, hand, since the patrons are naked so much of the time anyway, it was and is often hard not to get literal. The famous Esalen massages used to be given in the nude (nowadays, only the receiver is nude). One old-timer, now respectably dressed, fondly recollects a variation that involved six or more masseuses “healing” one person simultaneously.

The parade of Greats

What kept Esalen highbrow, however, was a steady influx of intellectual heavyweights, many of them Jewish European émigrés. Almost any cutting-edge trend in psychology, body work and alternative medicine during the 1960s and 1970s passed through Esalen, where, as Mr Murphy puts it, it was "filtered, because a lot of this stuff veers off into quackery".

In psychology, Abraham Maslow, already well-known, dropped by in the 1960s and ended up staying. He tried to extend the human-potential concept by teaching ways to "self-actualise". Next came Fritz Perls, a psychotherapist who came close to capturing the flag with his "Gestalt therapy". The Esalen joke was that this was "Jewish Buddhism" or "Zen Judaism". The theory was that, whereas Freud had focused on a patient's past and his unconscious perception of it, Gestalt therapy focused on the here and now and the person's conscious perception of it. That bundle of sensory inputs and emotional interpretations makes up a narrative "construct", or Gestalt in German.

In his sessions, Mr Perls tried to free his students from the baggage of their past, often with brutal confrontations in front of the group. Other psychologists, such as William Schutz, soon extended this to "open-encounter" groups, where students played roles and told each other blunt and relentless truths. One example was called the "Pandora's Box" and involved the women "working through" fear of their genitals by exposing their vaginas, having the group look up them and then "process" their reactions together. Sometimes, these sessions led to emotional catharsis; sometimes to bitterness and divorce.

Esalen's other big export was body work, which at Esalen blurred the boundaries between medicine and spirituality. Today, it is possible to get "rolfed" at spas all over the world. This method was refined at Esalen, when Ida Rolf came there and taught her ideas about digging elbows and knuckles deep into a person's connective tissues, not only to correct skeletal alignment but also to liberate pent-up emotions. Once, as she worked on Mr Perls, he passed out completely for minutes, and Ms Rolf feared that she might have rolfed herself a corpse. But her method caught on, and she started her own institute in 1971.

Esalen was a launching pad for Moshe Feldenkrais, now famous for his "Feldenkrais Method". He was a nuclear physicist who had suffered a football injury that threatened to paralyse him. He healed himself through bodily movements that sprang from his knowledge of judo and other martial arts. The motion of the limbs seemed to forge new connections in the brain, as though the body taught the brain.

Next came Charlotte Selver, who taught a form of "sensory awareness" that today forms the basis of the "Esalen massage", a contemplative style with long strokes that is known in France as "*massage Californien*". Another teacher, Don Hanlon Johnson, would extend this to a general approach called "somatics", which includes any number of ways to access the mind through the body.

Esalen also played a crucial role in bringing Eastern, or "holistic", medicine to the American mainstream: staff members helped to draft the first industry regulations. In the field of mythology, Joseph Campbell lectured at Esalen for years before he became famous. Fritjof Capra, a particle physicist who saw parallels between quantum physics and Eastern philosophy, and wrote about these in "The Tao of Physics", spent time at Esalen. And, in the 1980s, Esalen gave East-meets-West a political dimension when it pioneered "citizen diplomacy" with the Soviet Union, culminating in its sponsoring of Boris Yeltsin's private trip to America in 1989.

That empty feeling

But in the 1970s and 1980s, Esalen also had unpleasant encounters with the real. Mr Murphy had moved to San Francisco, and Mr Price was running the place, and not exactly along corporate lines. He used Lao Tzu's Tao Te Ching (think "managing emptiness") as his governance guide, and was advised by a council called "Jenny and the Nine", whose most noteworthy feature was that they did not exist. Esalen was perennially on the verge of bankruptcy. In 1985 Mr Price died, in true Esalen style. He hiked up the mountain to the source of the hot springs, and was apparently meditating when a boulder fell on him.

By then the trends that Esalen had spawned—called New Age, probably the most hated term at Esalen—were becoming mainstream and banal. Culturally, the entire West Coast now resembled Esalen, and colonies were springing up from Koh Samui to Kitzbühel. Esalen appointed a series of more business-minded managers who restored its finances. But by the 1990s, the place felt intellectually and erotically

stale, just another spa where ageing hippies got pampered. Was it, as some unkind graffiti on the welcome sign read, just “jive shit for rich white folk”?

In 1998 El Niño almost blew the baths off the cliff. There was talk of shutting the place down. Instead, the baths were rebuilt, and Mr Murphy started the “centre for theory and research”, his “R&D arm”, as he calls it, to spawn new ideas. The spawning, so far, seems ho-hum. There is talk about eco-psychology. And Esalen hopes to extend a new round of East-West citizen diplomacy to Islam. Most tellingly, though, Esalen now produces papers with titles such as “Integral Business Planning Document”. PowerPoint presentations cannot be far off.

Esalen's old-timers debate the way forward. Jerome Gary first came in 1969, when he was 22 and a hippie, and had met a bellydancer who took him to the baths. Now 60, he plans to make a documentary about Esalen—he has already made films about other Californian phenomena, such as “Pumping Iron” in 1977, which featured a young body-builder named Arnold Schwarzenegger. Esalen's problem is that “yesterday's iconoclast is today's cliché,” says Mr Gary. On the other hand, “we're in a culture once again where we are experiencing clashing fundamentalisms” and Esalen could help as the counterpoint.

In a sense, Esalen is a victim of its own success. The culture it created is now mainstream. In another sense, it is just a manifestation of California as its vibrant, healthy self. Young people looking for a place to express themselves, to flaunt and paint their bodies and try anything that promises to be zany and cool still have a place to go—only now it is called Burning Man, a festival in the Nevada desert. Those looking for intellectual radicalism, indeed human potential, go to the annual TED conference up the road in Monterey.

Whether at Esalen or not, Californians are still willing to try anything new—to do it until it hurts and to become caricatures in the process—in order to explore how far we can go as human beings. The consequences may sometimes be laughable, but somebody has to do it.

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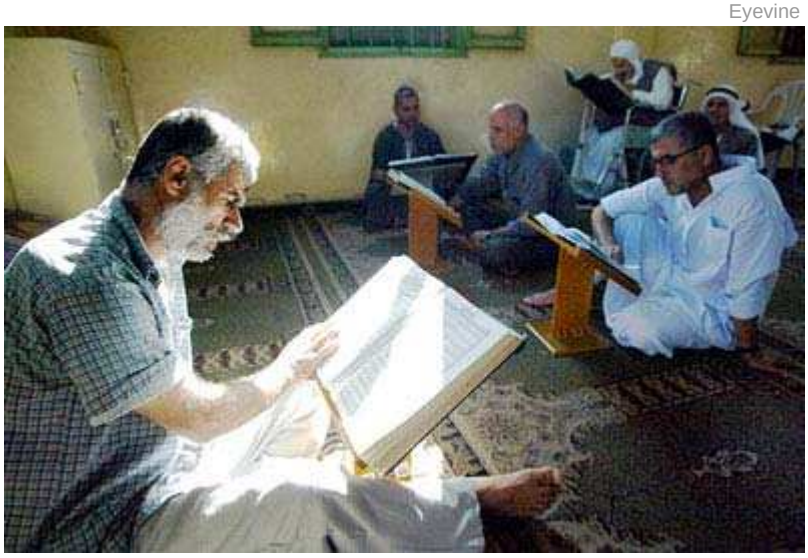
The Bible v the Koran

The battle of the books

Dec 19th 2007 | WASHINGTON, DC

Eyevine



The business of marketing the Bible and the Koran says a lot about the state of modern Christianity and Islam

CHRISTIANS and Muslims have one striking thing in common: they are both “people of the book”. And they both have an obligation to spread the Word—to get those Holy Books into the hands and hearts of as many people as they can. (The Jews, the third people of the book, do not feel quite the same obligation.)

Spreading the Word is hard. The Bible is almost 800,000 words long and littered with tedious passages about begetting. The Koran is a mere four-fifths of the length of the New Testament; but some Westerners find it an even more difficult read. Edward Gibbon complained about its “endless incoherent rhapsody of fable and precept”. Thomas Carlyle said that it was “as toilsome reading as I ever undertook; a wearisome, confused jumble, crude, incondite”.

Yet over 100m copies of the Bible are sold or given away every year. Annual Bible sales in America are worth between $425m and $650m; Gideon's International gives away a Bible every second. The Bible is available all or in part in 2,426 languages, covering 95% of the world's population.

The Koran is not only the most widely read book in the Islamic world but also the most widely recited (“Koran” means “recitation”). There is no higher goal in Muslim life than to become a human repository of the Holy Book; there is no more common sound in the Muslim world than the sound of Koranic recitation.

Reciting the Koran is the backbone of Muslim education. One of the most prized honorifics in Islamic society is “hafiz” or “one who has the entire scripture off by heart”. Do so in Iran and you get an automatic university degree. The great recitors compete in tournaments that can attract audiences in the hundreds of thousands—the world cups of the Islamic world. The winners' CDs become instant bestsellers.

The Bible and the Koran have both gone global. In 1900, 80% of the world's Christians lived in Europe and the United States. Today 60% live in the developing world. More Presbyterians go to church in Ghana than in Scotland. In 1900 Islam was concentrated in the Arab world and South-East Asia. Today, there may be as many practising Muslims in England as there are practising Anglicans; though in the 20th century, at least, Islam's expansion has mostly come about through population growth and migration, rather than conversion. Muslim “missionary” activity is aimed more at reinvigorating the

faithful, and encouraging them to greater zealotry, than at winning new souls.

This mountain of Holy Books is a giant refutation of the secularisation thesis—the idea that religion recedes as the world modernises. “The book lives on among its people,” Constance Padwick, a scholar of the Koran, has written. “For them these are not mere letters or mere words. They are the twigs of the burning bush, aflame with God.” The same can be said of the Bible.

Getty Images

It also poses a couple of intriguing questions. Why are today's Christians and Muslims proving so successful at getting the Word out? And who is winning the battle of the books? Is either of the world's two great missionary religions gaining an edge when it comes to getting their Holy Books into people's hands and hearts?

The straightforward answer to the first question is that Christians and Muslims are both proving remarkably adept at using the tools of modernity—globalisation, technology and growing wealth—to aid the distribution of their Holy Books. “Give me Scotland or I die,” John Knox once cried. Today's faithful aim for the world.

The combination of globalisation and rising wealth is proving to be a bonanza for both religions. The most prolific producer of Christian missionaries, on a per head basis, is now South Korea. The biggest Bible publishing houses are in Brazil and South Korea. An interlinked global network of 140 national or regional Bible Societies pools resources to reach its collective goal of putting a Bible in the hands of every man, woman and child on the planet. The American Bible Society, the biggest of the lot, has published more than 50m Bibles in atheist China.

Saudi oil wealth is supercharging the distribution of the Koran. The kingdom gives away some 30m Korans a year, under the auspices of either the Muslim World League or individual billionaires, distributing them through a vast network of mosques, Islamic societies and even embassies. Go to FreeKoran.com and you can have a free book in your hands in weeks.

Saudi-funded dissemination of the Koran, along with literature promoting the stern Saudi understanding of Islam, may not have much direct effect on Christians, or the unchurched. But it does increase the relative weight, within Islam, of teachings which tend to sharpen the Christian-Muslim divide. For example, traditional Muslim teaching stresses those passages in the Koran which affirm the Christian Gospel and the Hebrew Torah as valid revelations of God and paths to salvation. But there is a harsher, Saudi-influenced view which insists that since Muhammad delivered the final revelation, Christianity and Judaism have lost their power to save.

The Muslim diaspora and Muslim missionaries are bringing the faith to previously untouched areas. The Tablighi Jamaat (“the group that propagates the faith”) is a global network of part-time preachers who dress like the Prophet, in a white robe and leather sandals, and travel in small groups to spread the Word. Their annual gatherings in India and Pakistan attract hundreds of thousands.

Technology is proving to be a friend of the Holy Books. You can consult them on the internet. You can read them on your “Psalm pilot” or mobile phone. You can listen to them on MP3 players or iPods (“podcasting” has given rise to “Godcasting”). Want to “plug into God without unplugging from life”? Then simply buy a Go Bible MP3 player. Want to memorise the Koran? Then buy an MP3 player that displays the words as you listen. Want to network with like-minded people? Then the eBible allows you to discuss

biblical passages with virtual friends.

Several television channels and radio stations do nothing but broadcast the Koran. At the other end of the technological spectrum, the American Bible Society produces an audio device, powered by a battery or hand crank and no bigger than a couple of cigar boxes, that can broadcast the Bible to a crowd of a hundred.

Getty Images

A well-thumbed Book

There is a difference, however, between getting and understanding a Holy Book. Here both Christianity and Islam suffer from serious problems. Americans buy more than 20m new Bibles every year to add to the four that the average American has at home. Yet the state of American biblical knowledge is abysmal. A Gallup survey found that less than half of Americans can name the first book of the Bible (Genesis), only a third know who delivered the Sermon on the Mount (Billy Graham is a popular answer) and a quarter do not know what is celebrated at Easter (the resurrection, the foundational event of Christianity). Sixty per cent cannot name half the ten commandments; 12% think Noah was married to Joan of Arc. George Gallup, a leading Evangelical as well as a premier pollster, describes America as “a nation of biblical illiterates”.

Muslims greatly prefer to read the Koran in the original Arabic. Yet the archaic language and high-flown verse, while inspiring, can also be difficult to understand even for educated Arabic speakers. And only 20% of Muslims speak Arabic as their first language. Illiteracy rates are high across the Muslim world. Many students of the Holy Book do not understand much of what they are memorising.

This needs to be kept in mind when considering who is winning the battle of the books. For some, the question is an abomination. Can't both sides win by converting the heathen? And aren't Christianity and Islam fellow Abrahamic faiths—different versions of the Truth? Others worry that the question is impossible to answer, since there are no systematic figures on the distribution of the Koran, and the battle's front-line cuts through some of the darkest and most dangerous places on the planet. Muslims would argue that their struggle was aimed more at galvanising their own flock than at converting unbelievers. But Islam's relative introversion doesn't make for peaceful coexistence. In many parts of the world, Islamic authorities have reacted furiously to attempts by Christians to entice Muslims to “apostasise” or renounce their faith; in traditional Islamic law, the penalty for apostasy is death; and encouraging believers to apostasise is also treated as a crime.

In many parts of the world, battle seems to be in progress. The Saudis will not allow the Bible to be distributed on their soil. Many Evangelical Christians are fixated on what they call the 10/40 window—the vast swathe of the Islamic world in Africa and Asia that lies between latitudes 10 and 40 north of the equator. The Southwestern Baptist Theological Seminary in Texas has even created a masters degree to train missionaries in the art of converting Muslims. Some Evangelicals produce counterfeit Korans that are designed to plant doubt in Muslim minds.

And the battle of the books is certainly at the heart of the battle between the two religions. People who get hold of Bibles or Korans may not read them or understand them. Unless they are introduced to the books they will certainly remain heathens. Even an imperfect report on the state of the battle tells us a lot about the world's two great missionary religions.

The Christians entered the 21st century with a big head start. There are 2 billion of them in the world compared with 1.5 billion Muslims. But Islam had a better 20th century than Christianity. The world's Muslim population grew from 200m in 1900 to its current levels. Christianity has shrivelled in Christendom's European heart. Islam is resurgent across the Arab world. Many Christian scholars predict that Islam will overtake Christianity as the world's largest religion by 2050.

More recently, though, Muslims complain that the “war on terror” is making it much more difficult to spread the Koran. Contributions to Muslim charities have fallen since September 11th 2001. Several charities have had their funding disrupted. Missionary organisations such as the Tablighi Jamaat are under investigation by Western intelligence services, on the grounds that they may be way-stations to jihadism. And Muslims confront much bigger long-term problems in the battle of the books.

The first is Christianity's superior marketing skills. Its religious publishing houses are big businesses. Thomas Nelson, which was once owned by a former door-to-door Bible salesman, was bought in 2005 for $473m. And secular publishing houses have also got religion: HarperCollins bought Zondervan, a religious book publisher, in the late 1980s, and now most mainstream publishers are trying to produce their own Bibles. As a result, all the tricks of the publisher's trade are being applied to the Bible.

Consider product proliferation. Thomas Nelson publishes 60 different editions of the Bible every year. The Good Book now comes in all colours, including those of your college. There are Bibles for every sort of person, from “seekers” to cowboys, from brides to barmen. There is a waterproof outdoor Bible and a camouflage Bible for use in war zones. The “100 minute Bible” summarises the Good Book for the time-starved.

Consider user-friendliness. There are prayer books in everyday vernacular or even street slang (“And even though I walk through/The Hood of death/I don't back down/for you have my back”). Or consider innovation. In 2003 Thomas Nelson dreamt up the idea of Bible-zines—crosses between Bibles and teenage magazines. The pioneer was *Revolve*, which intercuts the New Testament with beauty tips and relationship advice (“are you dating a Godly guy?”). This was quickly followed by *Refuel*, for boys, and *Blossom and Explore*, for tweens.

There are toddler-friendly versions of the most famous Bible stories. The “Boy's Bible” promises “gross and gory Bible stuff”. The “Picture Bible” looks like a super-hero comic. “God's Little Princess Devotional Bible” is pink and sparkly.

The world's richest and most powerful country contains some 80m Evangelicals

There are about 900 English translations of the Bible, ranging from the grandiloquent to the colloquial. There are translations into languages, such as Inupiat and Gullah, that are spoken by only handfuls of people. Bob Hudson, of the American Bible Society, wants everybody on the planet to be able to claim that “God speaks my language”. A couple of eccentric geeks have even translated the Bible into Klingon, a language spoken only by scrofulous space aliens on “Star Trek”.

Publishers are producing sophisticated dramatisations of the Bible with famous actors and state-of-the-art sound effects. Zondervan's “The Bible Experience” features every black actor in Hollywood from Denzel Washington to Samuel L. Jackson. Other outfits are making films that dramatise Bible stories as faithfully as possible.

And then there are the spin-offs. A “fully posable” Jesus doll recites famous passages of the Good Book. There are Bible quiz books, stuffed with crosswords and other word puzzles, and Bible bingo games. There are Bible colouring books, sticker books and floor puzzles. There is even a Bible-based juke box that plays your favourite biblical passages.

Muslims have also gone into the Holy Book business, but nowhere near as enthusiastically as Christians. This is partly because their commercial publishing houses are smaller and less sophisticated, but also because Muslims believe that the Koran is the literal word of God—dictated to Muhammad (who was himself illiterate) by the Angel Gabriel and then written down by Muhammad's followers. “The Koran does not document what is other than itself,” one scholar notes. “It is not about the truth. It is the truth.”

Thomas Nelson

This makes Muslims uncomfortable with translations. The Holy Book says sternly that “we have sent no messenger save with the tongue of his people.” Today most Muslims tolerate translations—there are now more than 20 English translations—but do so reluctantly. Most translations are as literal as possible. Pious Muslims are expected to

learn God's language.

The second advantage the Christians have is America. The world's richest and most powerful country contains some 80m Evangelicals. It supports more missionaries, more broadcasting organisations and more global publishers than any other country. Despite some countries' oil wealth, the Koran's heartland is relatively poor. The Arab world has one of the highest illiteracy rates in the world, with a fifth of men and two-fifths of women unable to read. It also has one of the lowest rates of internet usage.

The third big advantage is the West's belief in religious freedom—guaranteed in America by the constitution, and in Europe by an aversion to religious persecution caused by centuries of it. The heartland of Islam, by contrast, is theocratic. The Saudi Ministry of Islamic Affairs, Endowment, Call and Guidance employs 120,000 people, including 72,000 imams. Saudi Arabia bans non-Islamic worship and regards attempts to convert Muslims to another faith as a criminal offence. Pakistan has witnessed the attacks on Christian missionaries. Sudan punishes “religious deviation” with imprisonment.

Christian Evangelists complain that this creates an uneven playing field: Muslims can build giant mosques in “Christian lands” while Christians are barred from distributing Bibles in Saudi Arabia and Iran. But uneven playing fields tend to weaken the home players. Open competition is a boon to religion: American Evangelism has flourished precisely because America has no official church. And theocracy is ultimately a source of sloth and conservatism. “The Book and the Koran”, by Muhammad Shahrur, which tried to reinterpret the Koran for modern readers, was widely banned in the Islamic world, despite its pious tone and huge popularity.

This state-of-the-battle report comes with a health warning. Predicting the fate of religions is unwise, for they can burn or gutter in unpredictable ways. But two things are certain in the battle of the books. The first is that the urge to spread the Word will spark some of the fiercest conflicts of the 21st century. The area that is being most heavily fought over—sub-Saharan Africa—is a tinder box of failed states and ethnic animosities. The second is that the Bible and the Koran will continue to exercise a dramatic influence over human events, for both good and ill. The twigs of the burning bush are still aflame with the fire of God.

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Urban poverty in India

A flourishing slum

Dec 19th 2007 | MUMBAI

Panos

The residents of Dharavi, allegedly Asia's biggest slum, are thriving in hardship

AROUND 6am, the squealing of copulating rats—signalling a night-long verminous orgy on the rooftops of Dharavi, a slum in Mumbai—gives way to the more cheerful sound of chirruping sparrows. Through a small window in Shashikant ("Shashi") Kawale's rickety shack, daylight seeps. It reveals a curly black head outside. Further inspection shows that this is attached to a man's sleeping body, on a slim metal ledge, 12 feet above the ground.

With maybe a million residents, crammed into a square mile of low-rise wood, concrete and rusted iron, Dharavi is a squeeze. And in Shashi's family hutment—as slum-dwellings are known in Mumbai, where half the city's 14m people live in one—it feels like it. As the sparrows stir, so do the neighbours. Through the plank-thin walls of the tiny loft where Shashi, a jobbing cleric-cum-social-worker, lives above his parents, come the sounds of people bumping and bickering.

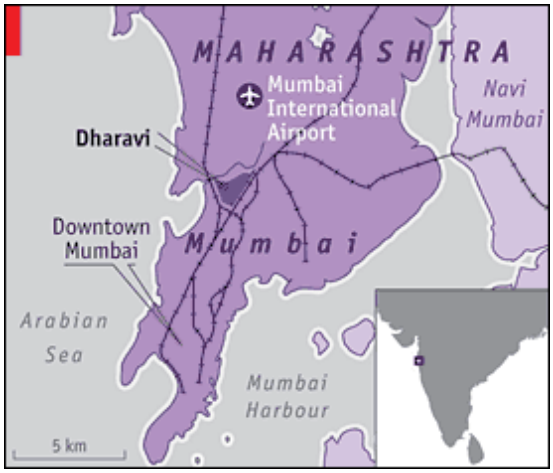
On one side is a family of 12 living in a 90-square-foot room—about half the size of an American car-parking space. On the other, eight people share a similar area. Night-sounds suggest they include a man with a painful cough, a colicky baby and an amorous couple. At least they can squeeze inside, unlike the man roosting behind Shashi's hutment—and unlike Parapa Kawale, a 22-year-old friend and neighbour, who had dropped by the previous evening to share a spicy bean curry.

Parapa, a semi-skilled electrician, lived with his parents, two brothers, their wives and two children in a room of 48 square feet. If half the family members slept on their sides, they could just about fit. But as the only single male, Parapa felt a dreadful gooseberry. Like Shashi, he is a member of the local branch of the Communist Party of India (Marxist), which tells Dharavi's youths not to marry unless they can support a family. Wretched nonetheless at the nightly coupling around him, Parapa began sleeping in the alley outside—and drinking heavily.

A month ago, explained Parapa, a strapping, beaming, Chaucerian fellow, he chased one of his brothers and a wife from the hutment in a violent, drunken rage. They fled back to the remote village in southern Karnataka that the family emerged from three decades before. Parapa then fixed a man-sized plank to the hutment wall, so that while his father and brother made love to their wives below, he could stay chastely on the shelf. Still, he sometimes sleeps outside, beside an open sewer, in the blissful quietude of the street.

During a four-day stay in Dharavi, as the guest of Shashi and his friends, your correspondent heard many

such tales: of hard times, facing up and getting by. The narrators were sometimes bitter or suspicious, but mostly friendly, almost invariably courteous, and occasionally, like Parapa, very funny. If poverty can seem dehumanising from afar—especially in much reporting on it—up close Dharavi, which is allegedly Asia's biggest slum, is vibrantly and triumphantly alive.



Soon after 6am, in the metre-wide street outside Shashi's hutment, an ugly morning ritual has begun. “It's my turn! My husband needs to get to work!” a woman shouts, in jostling over a water tap. In Shiva Shakti Nagar, a slum area of *dalits* (former “untouchables”) from rural Maharashtra, there is a tap for every ten houses, or roughly 100 people. “Push off! My kids are late for school!” another woman lashes back.

All along the street, water is gushing into blue plastic tanks and aluminium tubs, washing sticky breakfast dishes clean. It flows down the street in a rippling sheet. Bisecting it is an open drain, which gushes torrentially, flushing away the detritus of the previous day.

From the stink of this, it includes a lot of human excrement—which tiny naked children, squatting with their backsides jutting over the torrent, are busy adding to. In fact, it is not supposed to be used for this purpose. The locals are instead supposed to take their turn at a block of 16 public latrines, serving 300 hutments (or 3,000 people). It costs a rupee a visit—or 30 rupees (75 cents) for a monthly family ticket.

Outside the men's side of the block, a line of bleary-eyed *dalits* are silently waiting. Most are still dressed for bed, in cotton shawls and sarongs—for custom dictates that they purge before washing. Wordlessly, they usher this foreigner to the front of the queue. And he remembers words of welcome uttered by another Dharavi Marxist, Raju Korde: “A guest is from God, but I'm worried that you won't like our toilets.” Happily, the Asian-style loos are as clean as they could possibly be.

At 7am the early shift begins in Dharavi's 15,000 hutment factories. Typically, they consist of one or two jerry-built storeys, stuffed with boys and men sewing cotton, melting plastic, hammering iron and moulding clay. Indeed, it is for its industry, not its size, that Dharavi is most distinctive. The clothes, pots, toys and recycled materials its residents produce earn them millions of dollars in annual exports alone. As the sun climbs over Dharavi, a rising timpani of metal on metal, a whirring of small machinery, indicate that the working-day has begun.

Ramesh Kadam is at his desk in the Peela Bangla (Yellow Bungalow) tannery company. One of the oldest in Dharavi, it occupies the same factory, beside a stinking black creek, that Mr Kadam's grandfather founded in 1918. The site was chosen for its proximity to the main slaughterhouse of Bombay, as Mumbai was called. Handling meat and tanning leather are considered unclean in Hinduism, so the factory was built out of sight, on an island, with villagers of the lowly Koli fishing caste mending their nets on its shore. Indeed, much of Dharavi was underwater at that time. And so it is today when the monsoon comes, flooding the slum with black creek water and sewage.

Panos

Shashikant Kawale, a courteous host

As Bombay boomed, on the back of its port and textile mills, poor peasants flowed in from the land. During periodic famines—including one in Bengal in 1943 that killed 3m people—they came in spate. Dharavi is where these migrants claimed—or reclaimed—a plot. Shashi's parents were propelled from Karnataka by a drought, arriving in the city with five small children in 1976. “In the village we were starving,” says his mother, Shantabai, creator of the tasty bean curry. “Here, we were poor, but we could eat.”

Mr Korde's parents, landless vagrants from central Maharashtra, trekked in around the same time. His father died recently of tuberculosis, after a career spent hefting sacks of lentils in a factory. His mother, Leelabaiy, a pugnacious 65-year-old jangling with green bangles, lives with Mr Korde and his wife and two children in a three-room slum-house. Unlike her husband, she had some schooling, and retains a slightly sophisticated air. Asked why she married down, she lifts up seven fingers—one for each of the elder sisters who had first to be found a husband and dowry.

With this history, Dharavi's population is diverse. Tamils, Andhras, Assamese, Biharis, Bengalis and local Maharatis; all India's peoples are here. Perhaps a little over half belong to India's poorest groups: *dalits* and Muslims. They tend to live semi-ghettoised, as in Shiva Shakti Nagar, within the same language group. Indeed, the poorer Dharavi's residents are, the more caste-sensitive they are likely to be. Mr Kadam is a *dhor*, of the *dalit* tanning caste. Yet as his business thrived, his family became middle class, a powerful identity. Last year Mr Kadam exported 25,000 leather belts to Wal-Mart in America. He has moved his family from Dharavi to a smart suburb of Mumbai. Laughing proudly, he says his teenage son refuses to visit the ancestral factory, which he considers dirty.

The four children of Venkatesh Dhobi, all aged ten years and under, cannot shun their ancestral pool of filth. They work every day in this well of brown water, beside a litter-strewn railway line. They pass unwashed clothes into the pool, where 20 adult *dhobis*—of the *dalit* washer caste—soak and scrub them. With an explosive grunt to keep rhythmic time—a sound not unlike that emitted by Japanese Noh theatre actors—together they thwack the heavy sopping clothes onto smooth stones. The children then strew them between the railway tracks to dry.

They are the fifth generation of Dhobis to work at this pool. The first, says Mr Dhobi, was his great-grandmother, who arrived from Mehaboob Nagar, in Andhra Pradesh, a century ago. “For 100 years, we have served this city,” says Mr Dhobi, a short 35-year-old with the torso of an underpants model. And yet their rural roots have survived. All the *dhobis* in the pool—which is called Dhobi Ghat—are from Mehaboob Nagar. Aged 14, Mr Dhobi was married there to a local girl. The big changes of the past century, in his view, seem to be that Dhobi Ghat has got much dirtier and people send fewer clothes to be washed in it. India's swelling middle class—people like Mr Kadam—prefer washing-machines. Together, Mr Dhobi, his wife and four children earn less than 200 rupees a day.

Dharavi's diversity can be a problem. In 1992 communal rioting swept Bombay, sparking battles in the slum between Hindus and Muslims. Around 200 people were killed. But multi-culturalism is also a blessing. Unlike the city's more homogeneous shanties—including a rusty sprawl of 300,000 mostly Maharatis along the runways of the city's airport—Dharavi is too fractured, and massive, to be claimed as a vote-bank by any gangster-politician.

But the slum has known gangsters. In the 1970s a godfather of the Bombay mafia, Vardarajan Mudaliyar, more or less ruled it. Using the slum's large Tamil community—his own—as a base, he ran moonshine and

prostitution rackets. He also claimed ownership over thousands of illegal hutments, and extracted rents from their occupants. So did his gangster rivals. In those days, Dharavi was dangerous.

It has become safer for two main reasons. One is that in 1976 the state government gave the slum-dwellers limited rights over their hutments. They were recognised as “identified encroachers”, a status guaranteeing compensation in the event that the government bulldozed their shanties. In return, the government began collecting peppercorn rents—currently around 100 rupees a month for each hutment—on the encroached land. It also started supplying Dharavi with mains water and power, which the gangsters hitherto had stolen from the city and sold in the slum. This step put the slumlords out of business, and started a modest property boom. Today, tiny hutments in Dharavi are sold, without title, for 500,000 rupees.

Not all Dharavi is benefiting. Rajiv Gandhi Nagar, a huddle of hutments behind Mr Kadam's tannery, still has almost no mains power or water. In a shack cut into a bank of rubbish, overlooking Mumbai's plush Bandra Kurla business district, Karnla Ishwar, an aged widow and day-labourer, describes the cost of this. She buys water by the bucket an arduous ten-minute walk away. She buys electricity, at 100 rupees per appliance per month (plus a 500-rupee deposit), from a neighbour.

But Ms Ishwar is unlucky. With reliable power and water, many of Dharavi's residents have been able to start businesses inside the slum. In this they had a great advantage—the other main reason for the slum's rise. As Bombay expanded, so Dharavi became the heart of India's commercial capital. Indeed, in a city of notoriously rotten infrastructure, the slum is a transport hub. It is sandwiched between Mumbai's two main railway lines and ringed by six stations. In addition, Dharavi's hutment industrialists enjoy the competitive advantages of slum-life: cheap labour and an environment where government inspectors fear to tread.

Mr Korde, a portly 40-year-old, has seized this opportunity. The son of an unlettered vagrant, he has a business degree from Mumbai University and several small companies: a mobile-phone shop, a printing business, also a share in a co-operative bank. He reckons to earn 25,000 rupees a month. A decade ago, he bought his slum-house, on the western edge of Dharavi, for 450,000 rupees. Its value has almost doubled. “I am a Marxist and also an entrepreneur,” he says, a trifle defensively, in the nearby office of the Communist Party, seated beneath colourful portraits of Stalin, Lenin, Engels and Marx.

Panos

Venkatesh Dhobi, swamped with work

An evening stroll through Dharavi with Mr Korde, a well-liked local, is inspiring. Think 19th-century boom-time Brooklyn. In fluorescent-strip-lit shops, in snatched exchanges in the pedestrian crush, as a hookah is passed around a tea-stall, again and again, the stories are the same. Everyone is working hard and everyone is moving up. All Mr Korde's friends—or their fathers—arrived in Dharavi much poorer than they are now. Most own at least one business. Some of these slum-dwellers employ several hundred people.

Aftab Khan is typical. A tailor with a trim moustache, and scholarly wire-rimmed spectacles, he arrived from Uttar Pradesh (UP) 20 years ago, with little more than a needle. He now employs a dozen youths—all recruited in his native village—to turn out 150 items of children's clothing a day. In workhouse fashion, they eat and sleep where they labour, in the upper two floors of a hutment. Reachable only by a ladder and rope, this resembles nothing so much as a tree-house with sewing-machines. Yet for their drudgery, the apprentices earn 200 rupees a day—about four times a rural wage in UP.

The evening is darkening. And beside a barrow heaped with bright orange vermicelli—a sticky fibre eaten

during the Muslim festival of *eid*—Mr Korde introduces a local celebrity. He calls himself Raja Bhai, or King Brother. A handsome Bihari, and comic, Raja Bhai has in 15 years built a garment business employing 200 people. His success is impressive. Yet it has left him exposed to the predators of the informal economy: rent-seeking officials. To protect himself, he is now launching a second career, in politics.

In Dharavi, Raja Bhai is looking for a ticket with the Congress party, for the next municipal, or even state, election. Meanwhile he is campaigning for the Lok Jan Shakti party, a champion of low-caste Biharis, in his native state. Either way, he is sure he will soon get elected office—and with it the clout he will need to drive away the shake-down merchants.

For thousands of men like these, Dharavi is a wonderful opportunity. But for millions of Mumbaikers, it represents a cost. Their city, South Asia's biggest, is choking. Its infrastructure is a crumbling disaster. And yet over the next decade, the UN says the population of Mumbai will almost double, making it the world's second-biggest city after Tokyo. Massive urban redevelopment is required—starting with Dharavi, at the city's heart. By one estimate, the slum's land alone represents $10 billion in dead capital.

For a decade, the state government has tried coaxing the slum-dwellers to let it bulldoze their hutments and build high-rise apartments instead. Each dispossessed family is entitled to a flat of 225 square feet. After 30 years, they will be allowed to sell it. But only a few have accepted this offer. So now the government is trying to enforce it. In August it put the bulldozing and redevelopment of Dharavi, in six parcels, out to tender. The work was due to begin this year. But it has been stalled by bad press nationally and local protests, organised by Mr Korde.

For small businessmen like him, the redevelopment plan is a nightmare. The slum's hutment factories, havens from tax and regulation, would be destroyed. In their place would be purpose-built workshops, for rent at commercial rates. “I will be finished,” says Mr Khan, the scholarly looking tailor. For poorer residents, like Ms Ishwar, the widow living in rubbish-blown misery, the story would be different. Her new apartment, unlike her current hovel, would be fit for human habitation. If she, or rather her relatives, sold it, they would be rich. Either way, Mr Korde admits, the scheme will eventually happen.

Eyevine

Business is piling up for the recyclers

So, these may be the last days for Dharavi. If so, much that is wretched will be lost. And, who knows, maybe something better will arise. Most of the slum-dwellers doubt this. And a few high-rise blocks, scattered across the slum, do not inspire great hope. Many are half-built and slowly mildewing. Lots of their residents, it is said, have already sold up illegally, and moved back to the slums, seeking things that town-planners cannot provide: a sense of history, community and freedom. Dharavi has these, as well as many horrible problems. It is organic and miraculously harmonious. It is intensely human. Unlike the random tower-blocks, Dharavi makes sense.

It is 2am, and a violent drumming erupts outside Mr Korde's house. Booming in a six-beat rhythm, it ends in a crashing roll. This is repeated, again and again, rising as the drummers approach. The sound is thunderous. A few huge rats rush by the window, fleeing the noise like driven pheasants. And suddenly the drummers appear, parading through the slum, dragging on wheels a huge statue of Durga—a Hindu goddess, a multi-limbed and multi-coloured giantess, astride a tiger.

On the drum-roll, the processors pause, and golden flares explode either side of the statue. In every doorway, along the alley, slum-dwellers are watching in silence. It is a thrilling and dream-like sight. This

is apparently quite normal in Dharavi.

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Recycling

A soul-searching business

Dec 19th 2007 | MUMBAI

Panos

The slum-dwellers of Dharavi are green

LIKE Hindu souls, disposable plastic cups are many times reborn in Dharavi. In a spiralling continuum, they are discarded and gathered in, melted down to their polypropylene essence, and re-moulded in some new plastic form. Recycling is one of the slum's biggest industries. Thousands of tonnes of scrap plastic, metals, paper, cotton, soap and glass revolve through Dharavi each day.

Location is the key to this. Until two decades ago, the slum was next door to Bombay's biggest rubbish tip. This provided a livelihood for thousands of local *dalits*, for whom "ragpicking"—scavenging on society's leftovers for anything of salvageable value—is a traditional employment. The tip has since been shifted outside the city. So too, for want of space, have many of Dharavi's recycling units. Yet the roughly 6,000 tonnes of rubbish produced each day by a swelling Mumbai continues to sustain an estimated 30,000 ragpickers, including many residents of Dharavi. The slum is also host to some 400 recycling units.

To a devout low-caste Hindu, the recycling process might offer solace, for through its gyrations rejected goods come back in new and valuable forms. At the first turn of the wheel is Ravi, a scavenger waiting outside a garbage wholesaler to unload his day's labour—a sack of paper and plastic plucked from Dharavi's rancid alleys. Ravi is balding, has rotten teeth and reckons he is 35.

He says he arrived in Mumbai from Nagpur, Maharashtra, about 25 years ago, after fleeing a cruel stepmother. The journey took him a bit over three years, most of which he spent in prison; he was arrested aboard a train leaving Nagpur for travelling without a ticket. Since he got to Mumbai, he has spent every night on a nearby railway platform, and his days scavenging. Earning around 20 rupees (50 cents) per kilo of plastic litter, Ravi makes between 50 and 100 rupees a day—of which he aims to send 1,200 rupees a month to his younger sister in Nagpur. He has not been home, or seen her, since running away as a child. He explains this act of almost incredible selflessness thus: "I have no attachment to anyone except my sister."

The wholesaler will rebag Ravi's plastic and sell it to a sorter for 25 rupees a kilo. The recycling wheel turns again in a gloomy hutment in Jalil Compound in western Dharavi. In a blur of grubby hands, a row of five squatting youths rake a pile of plastic litter—bottle tops, machine parts and broken toys—between them, sorting it according to quality and colour. First in line is Mumtaz Ahmed, whose responsibility it is to pick out high-grade, thickly moulded plastic. A semi-schooled 18-year-old, who arrived from Uttar Pradesh six months ago, Mr Ahmed earns 100 rupees a day.

The sorted plastic is ground into flakes, and sold to a granule-maker—such as Nausheed Khan, a tall and dapper Dharavi-born businessman. In his factory, the plastic flakes are washed, melted, squeezed into hard brown wires, then chopped into pellets. A local bucket-making factory buys this stuff for 35 rupees a

kilo. Mr Khan, the head of a local chamber of commerce, expects to earn around 100,000 rupees a month. He reckons it takes 150 scavenged plastic cups to make 100 cups of recycled plastic. Not every cup, alas, can be saved.

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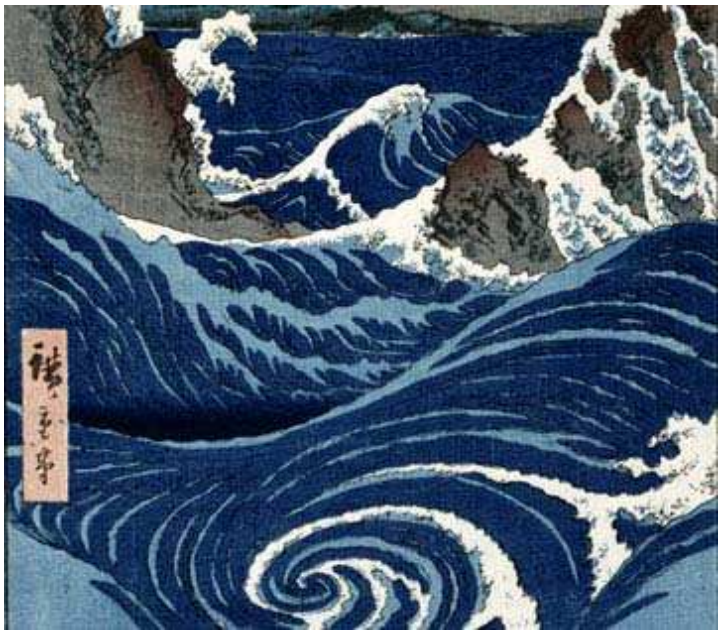
Japanese sea-drifters

When Japan was a secret

Dec 19th 2007 | NAKANOHAMA AND RISHIRI ISLAND

Long before Commodore Perry got there, Japanese castaways and American whalers were prising Japan open

Blackburn Museum and Art Gallery



> IF THAT double-bolted land, Japan, is ever to become hospitable, it is the whale-ship alone to whom the credit will be due; for already she is on the threshold.
>
> Herman Melville, “Moby Dick”, 1851

The first English-language teacher to come to Japan landed in a tiny skiff, but before he did so, Ranald MacDonald pulled the bung from his boat in order to half-swamp her, in the hope of winning over locals with a story that he had come as someone who had fled the cruel tyrannies of a whale-ship captain and then been shipwrecked. The four locals who approached by boat, though certainly amazed, were also courteous, for they bowed low, stroked their huge beards and emitted a throaty rumbling. “How do you do?” MacDonald cheerily replied. This meeting took place in tiny Nutsuka Cove on Rishiri Island off Hokkaido on July 1st 1848, and a dark basaltic pebble from the cove sits on this correspondent's desk as he writes, picked up from between the narrow fishing skiffs that even today are pulled up on the beach.

Rishiri is about as perfect a round volcanic island, perhaps nine miles across, as it is possible for a schoolchild to draw. It is also just about as far north in Japan proper as it is possible to be: if you start climbing the volcano, the coast of Russian Sakhalin comes into view. MacDonald took an intentionally oblique route to get into closed Japan. And indeed, the locals who approached MacDonald were not Japanese at all, but rather the supremely hairy Ainu, whose women tattooed their upper lip.

The Ainu were the original inhabitants of much of northern Japan, while related groups had long settled Sakhalin and Kamchatka. One 19th-century British explorer and naval captain, Henry Craven St John, described the fair-skinned Ainu as “something like a strange drop of oil in the Ocean, being surrounded by Mongols [including Japanese] yet not one of them.” But just as European settlers were pushing the American frontier westwards—MacDonald himself was born in present-day Oregon of Princess Raven, favourite daughter of the Chinook king, and a Scottish fur trader with the Hudson's Bay Company—so the Japanese were pushing north. Modern-day Hokkaido (literally, the way to the northern seas) was then known as Ezo, whose written characters connote wildness and barbarity. Today, only vestigial communities of Ainu survive.

Far from fleeing a tyrant, MacDonald had in fact had to plead with a concerned captain of the *Plymouth*, a whaler out of Sag Harbour, New York, to be put down in the waters near Japan. MacDonald had an insatiable hunger for adventure, and the desire to enter Japan—tantalisingly shut to the outside world—had taken a grip on him. Both men knew of the risks, but the captain was less inclined to discount them. For 250 years, since the Tokugawa shogunate kicked Christian missionaries and traders out, only a tightly controlled trade with the Netherlands and China was tolerated in the southern port of Nagasaki, with a further licence for Koreans elsewhere. Though British and Russian ships had from time to time prodded Japan's carapace, an edict in 1825 spelled out what would happen to uninvited guests “demanding firewood, water and provisions”:

> The continuation of such insolent proceedings, as also the intention of introducing the Christian religion having come to our knowledge, it is impossible to look on with indifference. If in future foreign vessels should come near any port whatsoever, the local inhabitants shall conjointly drive them away; but should they go away peaceably it is not necessary to pursue them. Should any foreigners land anywhere, they must be arrested or killed, and if the ship approaches the shore it must be destroyed.

Two decades later the despotic feudalism of the Tokugawa shogunate was under greater strain. At home the land had been ravaged by floods and earthquakes, and famines had driven the dispossessed and even samurai to storm the rice warehouses of the *daimyo*, the local lords. Abroad, Western powers were making ominous inroads. After the opium war of 1840-42 China ceded Hong Kong to Britain. Meanwhile, thanks to a growth in whaling and trade with China, the number of distressed Western vessels appearing along Japan's shores was increasing. Moderate voices made themselves heard within the government. A new edict was softer:

> It is not thought fitting to drive away all foreign ships irrespective of their condition, in spite of their lack of supplies, or of their having stranded or their suffering from stress of weather. You should, when necessary, supply them with food and fuel and advise them to return, but on no account allow foreigners to land. If, however, after receiving supplies and instructions they do not withdraw, you will, of course drive them away.

MacDonald knew the risks, and approached Japan obliquely in order to minimise them. Even so, he spent the next ten months in captivity.

Ocean streams

MacDonald's curiosity about Japan had first been aroused as a child, with the arrival in 1834 of three Japanese castaways. More than a year earlier a full Japanese crew had set off in the *Hojun-maru* from the port of Toba with a cargo of rice and ceramics intended as annual tribute for the shogun up the coast in Edo (modern-day Tokyo). Very quickly they were blown offshore by a sudden autumn storm. Fourteen months later the crippled junk and its survivors were washed ashore on Cape Flattery, in current-day Washington state, along with the bales of rice and boxes of fine porcelain. A delighted band of Makah Indians seized what they could of the cargo and enslaved the survivors. The Hudson's Bay Company, who traded with the Makah, found the sailors and bought them.

Seafarers from the isles of Japan have been drifting eastwards in crippled vessels for hundreds of years, and perhaps millennia. Presumably, they mingled blood if they survived along the way—MacDonald himself felt he might be a recipient.

Their conveyor belt was the Kuroshio (Black) Current, named after the deep colour of its waters. The Kuroshio is the north Pacific's Gulf Stream, for it brings warm water from the tropics up east of Taiwan, north-eastwards along the Japanese coast and on towards the polar regions, sweeping east below the Aleutian isles and down the American coast (see map). To this day Japanese fishing floats and even monks' wooden sandals are washed up on the shores of the Pacific Northwest. Katherine Plummer in “The Shogun's Reluctant Ambassadors: Japanese Sea Drifters in the North Pacific” (Oregon Historical Society, 1991) relates the case of the ghost ship *Ryoei-maru*, a motorised but stricken coastal fishing boat found off Vancouver Island in 1927 with the parched corpses of the crew on board and a poignant diary of their last days.

So tyrannically did the Tokugawa shogunate wish to deny its subjects outside knowledge that it was not just foreign sailors on the coast who risked punishment. Japanese sailors were not allowed to leave the country. They knew that if ever they were shipwrecked on foreign shores, then they were barred from returning to Japan. Some survivors came back regardless: sometimes a Russian ship would put them down among the Kurile Islands in a *baidarka*, a local canoe, loaded with provisions; the sailor would then make his way alone to Ezo. Others came back to Nagasaki via China on Chinese junks, with the help of Western missionaries, but if execution did not always follow, a stiff and lengthy interrogation certainly did.

Tokugawa xenophobia increased the risks of wreck or drift. To prevent sailors going abroad, shipbuilding rules restricted the seaworthiness of Japanese vessels. The coastal traders that brought grain and other tribute to Edo were in essence overloaded arks. They lacked stability. The wind caught their high sterns, hampering manoeuvrability. Meanwhile, they lacked the sturdy centre-mounted rudders of Chinese junks or Western craft, and Japanese rudders mounted to one side snapped readily in heavy seas, just when the craft most needed steerage.

To reduce the risk of foundering in a storm, the crew of a rudderless craft would cut down the mast, turning their vessel into a hulk, at the mercy of wind and waves. The crews of such stricken ships tended to turn spiritual. In 1813, according to a later account by the captain, Jukichi, the crew of *Tokujo-maru*, blown off-course for Edo with a cargo of rice, cut their top-knots as an act of purification, and one crew member shaved his head to become a monk. They prayed to Buddhist and Shinto gods (every vessel carried a shrine), and they prepared divination papers to find out where they were. After a year and a half

of drifting, during which most of the crew died, three survivors were picked up by a British ship off the coast of California.

Jukichi, reckoned to be the first recorded Japanese to land in America, returned home four years later, via Alaska and Kamchatka, and spent the first night in the village temple, as he had promised the gods. He spent the rest of his life begging funds for the memorial stone he had promised his crew.

The shogunate's hungry demand for tribute, which forced many vessels to set sail after the autumn rice harvest, no doubt increased the number of sea-drifters: that there was a word for them, *hyoryumin*, attests to their number. The plentiful supply of krill at the point where the warm waters of the Kuroshio meet Arctic waters, which attracted whales, no doubt increased the number of *hyoryumin* picked up by Western ships. A whaler from Brighton, Massachusetts, is reckoned to have been the first in Japanese waters, in 1820, when it came upon a pod of sperm whales. A year later 30 American ships cruised around Japan, and by 1839 the number of Western whalers had grown to 550, four-fifths of them American. It was off Japan, of course, that Captain Ahab lost his leg (“dismasted”) to the great white whale that was his nemesis, and in Herman Melville's imagination the mystery and danger of Moby Dick is fused with the land around which he swims.

As the north Pacific became more crowded, some of the Japanese sea-drifters were bound to help unlock the double-bolted land even before Commodore Matthew Perry steamed into Edo Bay in 1853 demanding recognition for the United States. One such was Otokichi, the youngest of the three found enslaved near Cape Flattery. The Hudson's Bay Company factor had sent the crew to London, with a notion that they might be used as a means to open up trade with Japan. They were then shipped to Macau, where they helped Karl Gutzlaff, an indefatigable missionary with a Hong Kong street still named after him, to translate St John's gospel into Japanese. They hoped to return to Japan in an American trader, but the vessel met with cannon fire in Edo Bay and Kagoshima. Rebuffed, they resumed their life in Macau.

Otokichi went on to Shanghai to work for a British trading company, married an Englishwoman—perhaps the first Japanese to do so—and prospered; after her death he married an Indian. As a British subject, John Matthew Ottoson was to return twice to Japan, the second time with the Royal Navy in 1854, to act as translator during the negotiations that opened Japan up to British trade. He is buried in the Japanese Cemetery in Singapore.

Manjiro, who made it back

The most famous sea-drifter is known in the West and even Japan as John Manjiro. Two days after Melville set off in early 1841 from Fairhaven, Massachusetts, on the whaling adventure that provided the material for “Moby Dick”, Manjiro, the youngest of five crew, set out fishing near his village of Nakanohama on the rugged south-western coast of Shikoku, one of Japan's four main islands. On the fourth day, the skipper saw black clouds looming and ordered the boat to be rowed to shore. It was too late. Over two weeks they drifted east almost 400 miles, landing on Torishima, a barren volcanic speck whose only sustenance was brackish water lying in puddles and nesting seabirds. In late summer even the albatrosses left. After five months, while out scavenging, Manjiro saw a ship sailing towards the island.

The castaways' saviour, William Whitfield, captain of the *John Howland*, a Fairhaven whaler, took a shine to the sparky lad. In Honolulu he asked Manjiro if he wanted to carry on to Fairhaven. The boy did, studied at Bartlett's Academy, which taught maths and navigation to its boys, went to church and fell for local girls. He later signed on for a three-year whaling voyage to the Pacific, and when he returned, joined a lumber ship bound round Cape Horn for San Francisco and the California gold rush. He made a handsome sum and found passage back to Honolulu.

By early 1851—the year of “Moby Dick” and two years before Commodore Perry turned up—Manjiro was at last back in Japan, and things were already changing. He and two of the original crew had been dropped in their open sailing boat by an American whaling ship off the Ryukyu Islands. They were taken to Kagoshima, seat of the Satsuma clan. The local *daimyo*, Shimazu Nariakira, grilled Manjiro, but the tone was inquisitive more than inquisitorial: please to explain the steamship, trains, photography, etc. In Nagasaki, Manjiro had to trample on an image of the Virgin and child. He was asked whether the *katsura* bush could be seen from America growing on the moon. He described America's system of government, the modest living of the president and how New Englanders were so industrious that they used their time on the lavatory to read. Amazingly, he dared criticise Japan's ill-treatment of foreign ships in need of wood and water, and made a heartfelt plea for the opening of Japan, going so far as to put the American case for a coal-bunkering station in Japan to allow steamships to cross the Pacific from California to China.

Rather than being kept in prison, he was freed to visit his mother—in Nakanohana she showed him his memorial stone—and was even made a samurai. In Tosa (modern-day Kochi), he taught English to men who were later influential during the overthrow of the shogunate and the establishment of constitutional government in the Meiji period, from 1860. During negotiations in 1854 with Perry, Manjiro acted as an interpreter. Later, in 1860, he joined the first Japanese embassy to America. But as Christopher Benfey explains in “The Great Wave: Gilded Age Misfits, Japanese Eccentrics and the Opening of Old Japan” (Random House, 2003), if the terror of being lost at sea was the defining experience of Manjiro's life, then his greatest gift to the Japanese was his translation of Nathaniel Bowditch's “The New American Practical Navigator”, known to generations of mariners as the “seaman's bible”.

As for Ranald MacDonald, though he was handed over by the Ainu and taken by junk to Nagasaki for interrogation, he was treated decently. With a respectable education and a gentle presence, he was clearly a cut above the usual rough-necked castaway, and he was put to teaching English. Some of the students who came to his cell later flourished as interpreters and compilers of dictionaries. The most notable, Einosuke Moriyama, served as the chief translator in Japan's negotiations with Perry, as well as interpreter to America's first consul to Japan, Townsend Harris.

In the spring of 1849 the American warship *Preble* arrived in Nagasaki, its commander, James Glynn, ignoring the imprecations from assorted Japanese craft to “go away, go away”. The American government had heard that the *Lagoda*, an American whaler, had been wrecked on the Japanese coast and a number of crew taken prisoner. (Historians now think the crew, whose numbers had diminished in prison through sickness and a suicide, were deserters.) The *Preble* was dispatched from Hong Kong to rescue them, the government thinking no doubt this was also a useful exercise in testing Japan's exclusionary resolve. To Glynn's surprise, he learnt that MacDonald, who had been presumed dead, was also in Nagasaki. The *Preble* carried the exultant adventurer to Macau, where he promptly signed on a ship that took him to Australia's goldfields.

A secret no more

Very soon after, Japan opened to the world. Its adoption of industrialisation and Western constitutional government was perhaps the most abrupt transformation of a country in history. That is well recorded. Less noticed was the change to sailors around Japan's coasts. Yet St John, the British explorer, relates a foreign shipwreck on Hokkaido just two decades after MacDonald left Nagasaki. The captain of the *Eliza Corry* was found by locals close to death on the shore. In short order, they made European clothes for him, even finding him a wide-awake hat. A table, fork and small and large spoon were fashioned for him,

while a junk, dispatched in a hurry, returned with three Californian apples and three sheets of foreign notepaper to complete his contentment.

As for whaling around Japan, vestigial echoes reverberate. Every northern winter, Japan faces barbs for sending a whaling fleet into Antarctic waters. And why, asks the mayor of Taiji, a small whaling port, should Japanese ships have to go so far, suffering international outrage? Because, he says, answering his own question, the Americans fished out all the Japanese whales in the century before last.

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The sex life of the panda

Black and white and red all over

Dec 19th 2007 | CHENGDU, HONG KONG, TAIPEI AND WOLONG

A boom in panda production is good for both bears and business

Imaginechina

LU LU paces up and down in a small concrete enclosure, showing no interest in a video he can see just outside his pen. He may have been excited by the panda pornography the first time he watched it, but he certainly isn't now. It probably doesn't help that the soundtrack is malfunctioning. Pandas like the noise and smell of sex much more than the images.

Still, Lu Lu's keepers at the panda research centre at Wolong in Sichuan province, set among misty mountains covered in bamboo, rhododendrons and fir trees, believe that adult panda movies may have helped the conception of his daughter, Ying Ying, last year. One of a pair given by the Chinese leadership to celebrate the 10th anniversary of Hong Kong's handover from Britain to the communist mainland, she is now a star attraction at a theme park in the territory, and a symbol of new hope for China's panda population.

China's record of protecting its rare species has been desultory. In the world's first extinction of a large vertebrate for half a century, the Yangzi river dolphin was recently declared to have been wiped out (notwithstanding a reported sighting in August 2007). The South China tiger is close to disappearing in the wild (official claims in October of the first wild sighting in more than 30 years have been widely derided in China as false).

Pandas might have expected to get better treatment. With their winning combination of scarcity and cuddliness, they are a national symbol, a powerful instrument of foreign policy and a potent brand. Empress Wu of the Tang dynasty gave pandas to Japan in the 7th century. Mao Zedong's gift of Ling Ling and Hsing Hsing to President Richard Nixon in 1972 broke the ice between the two cold war rivals and gave birth to the term “panda diplomacy”.

Yet in the 1980s there were fears of imminent extinction, and much debate about why. At first many said the panda was an evolutionary dead end: it had bad genes and was hopeless at sex. If that was the case, protecting it was going to be tough. But increasingly scientists have put the blame on people, who exacerbated a problem caused by the life-cycle of the high altitude bamboo that is the panda's staple diet. In the 1980s, it burst into flower and died, as it does every 30 to 80 years; but human activity had deprived the pandas of access to lower altitude species that would once have served as a back-up.

Since then, China has begun to tackle the problems of both wild and captive populations. The captive panda breeding programme has undergone a remarkable transformation. Long-held beliefs about the animal's reproductive capacities have been shattered. No longer are desperate keepers feeding Viagra to

underperforming males (that did not work anyway). Researchers have given up ideas of cloning them. Good old-fashioned sex is now doing the trick, accounting for some 80% of births at Wolong. That's thanks to better habitats (larger areas help), better nutrition (more fresh bamboo) and new techniques for assessing when the female is in heat (only three or four days a year).

In 2006 Wolong had 17 cubs and Chengdu, capital of Sichuan and location of the other main panda-breeding centre, had 12—record crops for both institutions. As a result, a new problem has emerged: overcrowding. Wolong's new-born panda cubs lie in rows in bassinets, as in a maternity hospital. Last year some of the younger pandas fell sick, possibly because disease spreads easily between animals in close proximity. Wolong officials say all recovered. But the *China Daily*, a state-controlled newspaper, quoted an unnamed expert as saying that two died after a disease outbreak this year. Wolong is building new quarters farther away to scatter the captives more widely. It aims to keep births to around a dozen a year.

Life for wild pandas has been improving too, partly by accident. In 1998 floods along the Yangzi left thousands of people dead and millions homeless. Logging, which deprives river banks of water-absorbing tree cover, was blamed for exacerbating the disaster. The government banned tree-felling across a wide area, including much of the pandas' habitat.

Counting wild panda numbers is a difficult and controversial science, relying on estimates based on examination of droppings. The third and latest government survey, conducted between 1999 and 2003, put the population at 1,596. This was up from 1,114 in 1988 but was still short of the 2,459 pandas counted a decade earlier.

Given improvements in survey methods, experts warn against drawing firm conclusions from comparisons of the three sets of results. Many believe, however, that numbers in the wild are on the rise. Hu Jingchu of China West Normal University says there may be more than 2,000 now. Some researchers believe there may be considerably more. In 2006 Chinese and British scientists led by Michael Bruford of Cardiff University and Wei Fuwen of the Chinese Academy of Sciences published research on droppings found at Wanglang reserve in Sichuan. They concluded that there were 66 pandas living in that area, more than twice as many as the 2003 census suggested, implying a total wild panda population of 2,500-3,000.

Panda branding

Flush with pandas, Wolong is now experimenting with ways of releasing them into the wild. A male was set free in 2006. It was injured, apparently by another panda, re-released, and later found dead. Experts believe it fell off a tree during a fight. Another panda is likely to be released in the coming year, this time a female (thought less likely to get into trouble). The hope is that pandas can be released into small isolated wild populations that are in danger of being weakened by in-breeding.

In another eight to ten years, says Li Desheng of the Wolong reserve, China should have around 300 captive pandas of sufficient genetic diversity to ensure the indefinite survival of the species (there are now about 220). Efforts are now being made to identify the genetic make-up of the captives to ensure the best possible mating matches. Artificial insemination will still sometimes be necessary, but better and safer ways of doing this are being developed. The process normally involves the use of general anaesthetic, which is risky. Hong Kong's Ocean Park is working on a technique for training males to provide semen samples while wide awake.

More pandas do not bring down the price for foreign zoos, though, because China controls the supply. Since the height of the bamboo crisis in 1984, China has ceased handing out pandas free as a gesture of friendship to other countries. Western zoos now have to pay $1m per pair annually (plus another $600,000 if a cub is born) to keep them on what is normally a 10-year loan. Favoured countries may get better deals. Thailand's Chiang Mai Zoo is an exception, having secured a pair in 2003 for $250,000 a year, to the chagrin of its Western counterparts.

The money is still very useful. The number of panda reserves has increased to more than 60 from 13 in the early 1990s, with the area covered roughly tripling from 6,000 sq km in the same period. Hiring and training staff, replanting forest and bamboo and moving farmers away from panda habitats is costly. So too is breeding and looking after the captive population.

Sichuan province is increasingly keen to cash in on its black-and-white gold dust and has plans to tighten its hold over the brand (two other provinces, Shaanxi and Gansu, also have wild pandas, but considerably

fewer). In 2006 the Sichuan Panda Strategic Planning Office was established. The provincial legislature adopted a five year economic plan calling for a “panda brand strategy” aimed at boosting the revenues of Sichuan's leading companies. Draft measures are said to call for panda-branded goods and services to contribute 5% of Sichuan's GDP growth in 2010 and 15% by 2020. The idea is for these to use a common panda logo.

Tourism will be the driving force. Having gained some respite thanks to better protection of reserves from loggers, farmers and hunters, pandas now face an onslaught from the country's fast-growing middle classes in search of new leisure destinations. To help tour buses, the winding narrow road up to Wolong is being widened and straightened (the boom of dynamite echoes up the gorge whose peaks are home to rarely seen wild pandas). Tourist numbers to Wolong are likely to rise from 60,000 to 180,000.

The Wolong reserve has taken a 20% share in a local state-controlled tourism company; which raises questions of whether the pandas' and the tourism industry's interests are perfectly aligned. Experts disagree. Zhang Hemin, Wolong's director, argues that pandas are not as afraid of human beings as is generally believed. They have even been known, he says, to cross roads and wander into urban areas (though few of Wolong's panda experts have seen one in the wild). Others say human noises and smells scare pandas, even at a distance. The Sichuan government says it is promoting “eco-tourism”, but Fan Zhiyong of WWF, a conservation group (and a big contributor to panda conservation in China), is sceptical. “I sometimes ask, what is eco-tourism? Nobody can give me good answers,” he says.

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China and Taiwan

Pandaplomacy

Dec 19th 2007

Playing panda politics with Taiwan

Imaginechina

IT'S the ultimate gift for the country that has everything; and China, well aware of the diplomatic power of a panda, hands them out sparingly. In 2007 Australia and Spain became the latest countries to get their own. Spain's pair were sped through the VIP section of Madrid airport on their way to the city's zoo. Australia's, offered by President Hu Jintao during a visit to Sydney, are expected to arrive at Adelaide Zoo in 2009 (for the usual fee, of course).

The most political of all panda presents are Tuantuan and Yuanyuan (left). Now among Wolong's most famous attractions, the two bears were offered to Taiwan in 2005. Taiwan's independence-minded government turned them down, accusing China of using pandas to further its goal of taking over the island. The couple's names did not go down well either: *tuanyuan* means “reunited” in Chinese.

There is still hope. Taiwan's main opposition party, the Kuomintang, may win the presidential election in 2008. The KMT is pro-panda (China's offer was made to the party, not directly to the Taiwanese government). Despite a ruling by the Council of Agriculture in 2006 that the pandas could not be imported, Taipei's optimistic zoo has been busy building a panda enclosure. A rival bid has been made by a nearby theme park, Leofoo Village, which has already built its panda facilities. Sean Chuang, chairman of the company that owns Leofoo Village, says there is nothing wrong with the pandas' names. A KMT spokesman agrees.

Meanwhile, Tuantuan and Yuanyuan wait in their misty Chinese limbo. And pragmatic officials in Sichuan are doing good business luring Taiwanese tourists to Wolong to see the pair there.

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Retailing

Birth, death and shopping

Dec 19th 2007

The rise and fall of the shopping mall

Getty Images

THE Southdale shopping centre in Minnesota has an atrium, a food court, fountains and acres of parking. Its shops include a Dairy Queen, a Victoria's Secret and a purveyor of comic T-shirts. It may not seem like a landmark, as important to architectural history as the Louvre or New York's Woolworth Building. But it is. “Ohmigod!” chimes a group of teenage girls, on learning that they are standing in the world's first true shopping mall. “That is the coolest thing anybody has said to us *all day*.”

In the past half century Southdale and its many imitators have transformed shopping habits, urban economies and teenage speech. America now has some 1,100 enclosed shopping malls, according to the International Council of Shopping Centres. Clones have appeared from Chennai to Martinique. Yet the mall's story is far from triumphal. Invented by a European socialist who hated cars and came to deride his own creation, it has a murky future. While malls continue to multiply outside America, they are gradually dying in the country that pioneered them.

Southdale's creator arrived in America as a refugee from Nazi-occupied Vienna. Victor Gruen was a Jewish bohemian who began to design shops for fellow immigrants in New York after failing in cabaret theatre. His work was admired partly for its uncluttered, modernist look, which seemed revolutionary in 1930s America. But Gruen's secret was the way he used arcades and eye-level display cases to lure customers into stores almost against their will. As a critic complained, his shops were like mousetraps. A few years later the same would be said of his shopping malls.

By the 1940s department stores were already moving to the suburbs. Some had begun to build adjacent strips of shops, which they filled with boutiques in an attempt to re-create urban shopping districts. In 1947 a shopping centre opened in Los Angeles featuring two department stores, a cluster of small shops and a large car park. It was, in effect, an outdoor shopping mall. Fine for balmy southern California, perhaps, but not for Minnesota's harsh climate. Commissioned to build a shopping centre at Southdale in 1956, Gruen threw a roof over the structure and installed an air-conditioning system to keep the temperature at 75°F (24°C)—which a contemporary press release called “Eternal Spring”. The mall was born.

Gruen got an extraordinary number of things right first time. He built a sloping road around the perimeter of the mall, so that half of the shoppers entered on the ground floor and half on the first floor—something that became a standard feature of malls. Southdale's balconies were low, so that shoppers could see the shops on the floor above or below them. The car park had animal signs to help

shoppers remember the way back to their vehicles. It was as though Orville and Wilbur Wright had not just discovered powered flight but had built a plane with tray tables and a duty-free service.

Oddly, this most suburban American invention was supposed to evoke a European city centre. Hence Southdale's density and its atrium, where shoppers were expected to sit and debate over cups of coffee, just as they do in the Piazza San Marco or the Place Dauphine. Gruen exiled cars, which he thought noisy and anti-social, to the outside of his mall. Most contemporary critics thought Gruen had succeeded in bringing urbanity to the suburbs. Southdale was “more like downtown than downtown itself”, claimed the *Architectural Record*. Another asserted, in a rare example of journalistic hyperbole that turned out to be absolutely right, that the indoor shopping mall was henceforth “part of the American way”.

As Jeffrey Hardwick explains in his excellent biography, Gruen did not believe his creation would take business away from downtown shopping districts. He saw it as an adjunct to them. If indoor shopping centres harmed any businesses, Gruen dearly hoped it would be the fast-food stands and tacky strip malls that were sprouting like weeds along main roads. Southdale's first tenants shared this sanguine view. When it opened it was filled not with national chains but with second branches of downtown merchants.

By the 1970s malls were proliferating. Gruen toured America promoting his invention. Malls began to open in Europe too—where, Gruen was presumably surprised to learn, they were seen as quintessentially American. At home, two developments speeded their growth. The first was a change in the tax code which allowed investors to write down a large proportion of a new building's cost as a loss. That made malls much more profitable. The second was a widespread property-tax revolt that deprived local governments of their most reliable source of income. Desperate, they tried to lure businesses that they could milk for taxes. They were particularly keen on shopping malls.

Tribes of the mall

By the early 1980s indoor shopping centres were woven tightly into American culture. New cuisines (the term is perhaps too grand) emerged in them, thanks to chains like Cinnabon and Panda Express, which did not exist outside malls. They began to swell to the point of absurdity. Canada's West Edmonton Mall, which opened in 1982, has an ice-skating rink, a pool with sea-lions and an indoor bungee jump. The Mall of America, in Minnesota, has three rollercoasters and more than 500 shops arranged in “streets” designed to appeal to different age groups. Every morning it opens early to accommodate a group of “mall walkers” who trudge around its 0.57-mile perimeter for exercise.

Artists and urban anthropologists began to note the appearance of mall-based tribes. Most celebrated—and lampooned—were the Valley girls who congregated in California's Glendale Galleria. Frank Zappa's then-teenage daughter, Moon Unit, wrote a hit song that captured their argot (“ohmigod!”, “no biggie”, “grody to the max”, “total space cadet”) and praised the Galleria for having “like, all these, like, really great shoe stores”. Mall-oriented films followed, spreading the Valley girls' culture like spores in the wind.

Just as the onward march of malls began to seem unstoppable, though, things began to go wrong. In just a few years they turned from temples of consumption to receptacles for social problems. The changing attitude to shopping malls can be seen in two films, both of which, appropriately, are to cinema what Panda Express is to the Chinese culinary tradition.

George Romero's “Dawn of the Dead”, released in 1978, is ostensibly a story about a group of people struggling to survive in a world taken over by flesh-eating zombies. But it is also a commentary on the lurid appeal of shopping malls, which were then multiplying quickly. That becomes clear a third of the way through the film, when the humans must decide where to take refuge. They rule out the cities, which are thick with monsters. Yet they need food, water and fuel, which are hard to find in the wilderness. They decide to head for a suburban shopping mall.

Getty Images

Southdale in its gleaming heyday

There are a few zombies at the mall when the refugees arrive, staggering about aimlessly in a fashion familiar to Christmas shoppers. As one character explains, the monsters seem to have been drawn there by instinct: the mall was clearly an important place in their lives. Most of the humans are similarly intoxicated by the variety of goods on display. That worries the film's heroine, Fran. “I'm afraid,” she says. “You're hypnotised by this place, all of you. It's all so bright and neatly wrapped that you don't see that it can be a prison.” Nonsense, replies her boyfriend: “We got everything we need right here!” The rest of the film bears out the horror-movie dictum that nervous young women are always right.

In 1995 a much gloomier vision of the shopping mall appeared. If “Dawn of the Dead” suggested malls were monstrously appealing, Kevin Smith's “Mallrats” depicted them simply as magnets for dysfunctional youth. The film chronicles the mundane adventures of four young men who come to a New Jersey mall to hang out, complain about their girlfriends and annoy security guards. The shopkeepers loathe them because, as the manager of Fashionable Male, a clothes shop, puts it, they lack a “shopping agenda”. Indeed, they lack much of an agenda at all. In Mr Smith's mall everybody is a kind of zombie. As the film's tagline explained: “They're not there to work. They're not there to shop. They're just there.”

By the 1990s malls were in trouble. Having bred too quickly, they began to cannibalise each other. (Turn left out of Southdale's car park and the first building you pass is another shopping mall.) Discount shops, factory-outlet stores and category killers like Toys “R” Us ate into their profits. As middle-aged shoppers began to disappear, the teenagers who had inhabited malls from the beginning became more noticeable, which only made things worse. In 1998 *Good Housekeeping* ran a story entitled “Danger at the Mall”. Indoor shopping malls are now so out of favour that not one will be built in America before 2009 at the earliest, according to the International Council of Shopping Centres.

So many shopping malls have died or are dying that a new hobby has appeared: amateur shopping-mall history

One reason for the malls' problems is that the suburbs have changed. When the Southdale shopping centre opened on the outskirts of Minneapolis, the suburbs were almost entirely white and middle-class. Whites were fleeing a wave of new arrivals from the South (the black population of Minneapolis rose by 155% between 1940 and 1960). Although Gruen could not bear to admit it, his invention appealed to those who wanted downtown's shops without its purported dangers. These days, in Minneapolis as in much of America, the ethnic drift is in the opposite direction. The suburbs are becoming much more racially mixed while the cities fill up with hip, affluent whites. As a result, suburban malls no longer provide a refuge from diversity.

So many malls have died or are dying that a new hobby has appeared: amateur shopping-mall history. Like many esoteric pursuits, this has been facilitated by the internet. Websites such as Deadmalls.com and Labelscar.com collect pictures of weedy car parks and empty food courts and try to explain how once-thriving shopping centres began to spiral downward. Some of the recollections are faintly ironic or gloating. Yet the strongest note is anguish. Implausibly, these online histories reveal the deep emotional connections that people can establish with malls.

One of the most touching is a website devoted to Lakehurst mall near Chicago, which was demolished in 2004. Prodded by a local journalist, women and a few men write in with memories of back-to-school shopping trips, ear piercings, first jobs at Cinnabon and Orange Julius, early dates and even marriage proposals. Many are bereft at the mall's demolition, as though suffering the death of a pet. “You don't realise how much you miss something until it is gone,” writes one. Others are almost apologetic: “If only we knew what we had, we would never have strayed to other malls.”

As shopping malls decline, they sometimes come to resemble the civic centres that Gruen intended them to be. Attracted by cheap rents, community groups and police stations move in. On a trip to one of Gruen's creations, the now-desolate Carousel Mall in San Bernardino, your correspondent encountered a group of middle-aged Mexicans studying for the American citizenship test.

Not all malls have suffered from competition and the suburbs' transformation. Some have prospered by appealing to growing ethnic-minority groups. American malls are courting middle-class Latinos by adding butchers' shops and, in some cases, by decking themselves out to resemble Mexican villages. La Gran Plaza, in the Texas town of Fort Worth, lays on mariachi and reggaeton acts and is building a rodeo. Other malls changed their clientele without adjusting their look. Brent Cross shopping centre, one of Britain's earliest malls, now contains shops staffed by second- and third-generation Asians selling to new arrivals from eastern Europe.

The mall goes downtown

Yet without white, middle-aged women few British or American shopping centres could survive. One bold attempt to lure them back can be seen at the corner of Third Street and Fairfax Boulevard in Los Angeles. The Grove shopping centre, which opened in 2002, performs all the functions of a mall without looking at all like one. Like Southdale, it has fountains, flowers, piped music and a good selection of underwear. But the Grove is open to the elements, the plants are real and, rather than vaguely evoking a town centre, it is actually done up to look like one. Or rather (this being Los Angeles) a fantasy amalgam of several town centres.

Among the Grove's 40 or so buildings are a Caribbean house with shutters and a wooden balcony, an Art Deco cinema and a grand Beaux Arts building that houses a branch of the clothes shop Abercrombie & Fitch. Its fountains are choreographed to songs by Frank Sinatra and Sammy Davis junior. Every few minutes a tram trundles through the shopping centre. The tram's driver rings his bell almost constantly, because the other thing that distinguishes the Grove from an old-fashioned mall is that it is nearly always packed.

The Grove was built by Rick Caruso (below), a dapper man who owns eight shopping centres in southern California and has three more under way. His next project, a 16-acre development with a large public square, apartments and lots more fountains, will open in 2008 next to the Glendale Galleria. He also plans to build an open-air shopping centre by a race track in the city of Arcadia, where the weary will be transported from shop to shop in a horse-drawn carriage. It is a sign of the popularity of his developments, as well as the bleak future of conventional malls, that the owners of nearby shopping centres are fighting hard to stop him.

Getty Images

Rick Caruso and his “lifestyle centre”

Mr Caruso doesn't think he builds malls. The industry term is “lifestyle centres”; he calls his creations simply “streets”. Nor can he claim to have invented the outdoor shopping centre. Before Gruen's revolutionary designs, all shopping centres were open to the sky. But Mr Caruso has brought the open-air mall to a pitch of ersatz perfection. It is partly thanks to him, and particularly the Grove, that every new shopping centre built in America next year will be roofless (and several traditional shopping malls will tear off their roofs). Open-air centres will appear not just in temperate places like southern California but also in muggy Houston and frigid Massachusetts.

The mix-and-match appearance of the “lifestyle centres” is thought to be key to their appeal. Mr Caruso and his designers visit cities as diverse as Savannah and Capri to measure buildings and try to capture their appeal. Architectural styles are jumbled together with the aim of creating a festive, holiday atmosphere which people go to hang out in and end up spending money. “After all,” says Mr Caruso, “you buy things when you're on holiday that you wouldn't buy otherwise.” But Mr Caruso also claims, more boldly, that his creations are more “real” and authentic than conventional shopping centres.

It is an odd claim for a man whose signature style is a mish-mash of two continents' and several centuries' worth of architectural traditions. But, like Gruen half a century ago, Mr Caruso has a bold vision for his developments. Indeed, his vision is rather similar to Gruen's. Like the Austrian émigré, Mr Caruso believes that people are naturally gregarious, and that America has failed to provide them with places that meet their social needs. Like Gruen, he claims to be trying to create not just profitable shopping places but also more perfect city centres.

There is one crucial difference. Gruen wanted to improve upon the American city centre by modernising and Europeanising it. Mr Caruso, by contrast, looks to the past. He has tried to re-create a kind of prelapsarian downtown where there is no crime or homelessness. His romantic evocations of city centres are possible only because people have forgotten what downtowns used to be like. And they have forgotten, of course, largely because of the suburban shopping malls that Gruen built. It was necessary to kill the American city centre before bringing it back to life.

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Fraud and financial innovation

The match king

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Ivar Kreuger was the world's greatest swindler. He would have thrived today

Corbis

VADSTENA, a lakeside medieval town in central Sweden, has for centuries drawn pilgrims through the surrounding cornfields to the tomb of Saint Birgitta, a 14th-century noblewoman and mystic. Five minutes' walk from the abbey where her remains lie stands an imposing castle, surrounded by a moat, its tall Baroque tower looming through the mists that swirl off Lake Vättern. In the cellars of this fortress are racks upon racks of cables, letters and documents, stored in plain cardboard boxes. Two kilometres of them pertain loosely to one man, Ivar Kreuger, who in his heyday had a stature far more revered—at least in the world of finance and international diplomacy—than that of his devout countrywoman, Birgitta. Occasionally his papers still lure curious visitors to Vadstena.

If Birgitta is the patron saint of Europe, Kreuger was the patron saint of sinners; he was arguably the most brilliant and ambitious swindler who ever lived. In the first three decades of the 20th century, he built up an industrial empire founded on the most humble of innovations, the Swedish-made safety match, that lit a fire of speculative excess around the world creating, then burning through, fortunes that would be measured now in the billions. In the words of John Kenneth Galbraith, writing in 1961, “Boiler-room operators, peddlers of stocks in the imaginary Canadian mines, mutual-fund managers whose genius and imagination are unconstrained by integrity, as well as less exotic larcenists, should read about Kreuger. He was the Leonardo of their craft.”

This quiet man, who corresponded succinctly in many languages, could so nearly have become one of the 20th century's great individuals. When he shot a bullet, with steady-handed precision, through his heart in his Paris apartment on March 12th 1932, it felt to many as if a light had gone out across a darkening inter-war Europe and Depression-era America. His resounding optimism and his attempts to combat the era's despair by channelling money from rich nations to impoverished ones had earned him admirers everywhere. This newspaper, writing a week after his suicide, described the tragedy as one worthy of Aeschylus or Sophocles. “His death in Paris last Saturday by his own hand represents the veritably tragic wreck of a career which in its sphere was unsurpassed by that of any individual in living memory,” it said. Kreuger, it added grimly, in seeking to be a “force for good”, was crushed by the bleakness of his time.

So when *The Economist*, three weeks later, reported that chartered accountants had discovered “deception and manipulation of accounts” in his business empire, this paper was not alone in feeling

bitterly humiliated. The world threw up its hands in horror as details emerged of assets inflated by double counting and, worst of all, the forgery in Kreuger's hand of $142m of Italian bonds supposedly sold to him by Benito Mussolini's government. In Sweden, where Kreuger had been considered a national treasure for 25 years, the suicide rate rose and the prime minister fell. It soon became clear that Kreuger's businesses owed more than the country's national debt. In America shares of his international holding company collapsed, taking with them the life savings of thousands. His reputable New York underwriters, Lee, Higginson, disbanded in shame.

After the “Kreuger crash” shook Wall Street, America's Securities Act was passed in 1933 strengthening disclosure requirements for all companies selling stock. It stemmed directly from the Kreuger experience. It took five years for investigators to disentangle the accounts of his 400 companies. The reckoning? In a 15-year career he was estimated to have burned through about $400m of his investors' money.

His biographies sought to explain how a man of such genius and apparently noble aspirations destroyed so much. One of the best, “Kreuger, Genius and Swindler” was written in 1961 by an American crime reporter, Robert Shaplen. He traced the magnate's life from bourgeois beginnings in Sweden, where he was a boy of prodigious intelligence and mischievous temperament (“a kind of Swedish Dennis the Menace”), to greatness, and then calamity. It ends unable to conceal the author's awe at his bewitching subject, likening Kreuger to Dostoyevsky's anti-hero in “Crime and Punishment”: “Kreuger was a Raskolnikov of finance: he believed that superior men were not restricted by ordinary laws, and that the end justifies the means.”

Shaplen tries to draw a thick line under Kreuger's legacy. “The things he was able to do in carrying out his swindle would never again be possible, and in that sense he may also be said to have been the last of a free-wheeling breed.” Yet that was written in strait-laced America when finance was still firmly under the knuckle of Depression-era regulation and money rarely travelled east of the Statue of Liberty.

“There is the dangerous cliché in the financial world [that] everything depends on confidence. One could better argue the importance of unremitting suspicion.” Galbraith

Today's financial world looks rather more like the era of rootless, trans-oceanic finance that Kreuger entered when he first arrived by ship in New York in 1900, with $100 in his pocket. Once again, credit has ballooned and capital flits around the world faster than any human being can travel; those with the audacity to channel it where it is needed, as Kreuger did, can make unparalleled fortunes. And once again, financial innovation is moving faster than rules can keep up with it, which can lead to disastrous speculative excesses. Kreuger's story is a lesson in the dangers of excessive confidence, and fickle liquidity, that may be as relevant today as they were in the Roaring Twenties. As Galbraith, a scholar of speculative excess, pointed out when referring to Kreuger: “There is the dangerous cliché in the financial world [that] everything depends on confidence. One could better argue the importance of unremitting suspicion.”

The movement of capital was already transforming Sweden when Kreuger was born in 1880. The country, long one of Europe's industrial backwaters, sat on vast forestry and mineral assets. International capital poured into Swedish factories, which were busy finessing new technologies. One of the best-known, if more commonplace, inventions was the safety match, after a Swedish professor developed a non-toxic type of phosphorous, and stuck it on the side of match boxes. Ivar's father owned two match factories, but the young engineering graduate found little allure in the provincial family firm and at the age of 20 travelled to New York to seek his fortune.

Kreuger found a job as an engineer, helping build New York's Plaza Hotel and other landmarks. He resolved to apply what he had learned about new construction techniques back home in Sweden, and in 1908, aged 28, he set up a company in Stockholm with a friend. The Kreuger & Toll partnership quickly gained a reputation as the best construction firm in Sweden, built the country's first skyscraper and went public in 1914. But by then, Kreuger's restless mind was absorbed with another venture, which, though so rudimentary compared with engineering, he intuitively sensed had grander scope.

Backed by a trio of Sweden's top banks, he took over his father's match business, and hoodwinked his uncle, who was drunk at the time, to let go of his British match interests. When the outbreak of the first world war restricted the supply of aspen and chemicals used in Swedish matches, Kreuger found an opportunity to outflank Sweden's biggest producer and force it into a reverse takeover. By 1917 Kreuger was done with construction engineering; he founded the Swedish Match Company and his reign as one of the world's great monopolists—and financial engineers—began in earnest.

Just over a decade later in 1928, *The Economist*, writing of Swedish Match, noted: “It is curious that of the great international trusts in the industrial world there is none more firmly established than the colossus that has been built on matchsticks.” But the humble matchstick is not as puny as it sounds; indeed, the ability to cup flame in the hand, rather than rubbing sticks together for hours, must count as one of the greatest innovations of all time. After the war, its use spread around the world with gas ovens and cigarettes. A letter written by Kreuger to a friend in 1931 reveals his profound faith in his product's ability to hold its own in good times and bad. Swedish Match, he confided, had “not felt any effect of the present crisis...Often great unemployment causes an increase in the consumption of matches because people seem to smoke more cigarettes when they are not working.”

Striking a match

Matchmaking, however, is a fairly rudimentary business, and in post-war Europe, it took very little capital to run small, inefficient match factories that made just enough money to survive. Kreuger's vision was to consolidate them, and he did so in a way that brilliantly served a dual purpose: making him immensely rich and powerful on the one hand, and helping recapitalise Europe's shattered post-war economies on the other.

Advertising Archives

After secretly acquiring factories around Europe during the years of post-war Depression in the early 1920s, from 1925 onwards Kreuger began offering a bargain to penniless governments that many found hard to refuse. Kreuger would, he said (usually with great secrecy), lend money to countries that provided him with a national monopoly on match production. His monopoly and skilled marketing would increase sales (Kreuger was a first-rate salesman, too: he is said to have propagated the myth that it is unlucky to light three cigarettes from the same match). Governments taxed matches, so the higher sales would raise tax revenues used to repay the loans. It was, boasted Kreuger, an almost foolproof business plan: the loans were secured against revenues that he controlled; the monopolies, meanwhile, ensured generous returns.

According to a 1930 article in *Foreign Affairs*, Swedish Match struck such deals with nine European states and three South American countries in the 1920s. The loans totalled $253m, a fortune at the time. Germany received $125m; France, which never granted a full monopoly, $75m. In 1930 Kreuger even sent an emissary from his New York broker, Lee, Higginson, to China to persuade the Chiang Kai-shek government to give it a monopoly. The response was positive; the finance minister, Kreuger's envoy wrote, “is one of the few Chinese with whom one can feel an accurate interchange of ideas is possible.” The country was at war over Manchuria, however, and Kreuger doubted the Nationalists' ability to guarantee a monopoly. He called the talks off.

From the outset, the monopoly-for-loans *quid pro quo* enabled Kreuger to portray himself less as a naked profiteer (he was obsessed with maintaining “stable” ie, high, match prices) and more as a statesman, with the interests of European political and economic stability at heart. When much of Europe was starved of capital and balkanised after the Versailles peace treaty, he looked like a one-man Marshall Plan. Many of his loans were put to good use; he helped Germany, for example, to pay its war debts; he then mediated at the 1930 reparations talks between France and Germany. He could have accomplished none of it, however, without identifying another golden opportunity in that lop-sided era: the surplus capital in America and the greedy speculative spirit that accompanied it.

As *Foreign Affairs* put it in 1930, “the world war enriched America and impoverished Europe.” America's government was loth to finance the reconstruction of the Old Continent, but on Wall Street, when Kreuger came knocking, the doors swung wide open. In 1923 he set up the International Match Company (IMCO) in New York, and in less than ten years he raised an estimated $150m from American investors. All but $4.5m of that was transferred abroad, to finance government loans and expansion of the match empire. He hooked investors with an intoxicating cocktail of rising dividends and tax-exempt foreign earnings.

But despite the apparently flawless business model, match monopolies, it turned out, were not all that profitable. In order to offer spectacular returns, Kreuger paid dividends out of capital, not earnings. He was, in effect, operating a giant pyramid scheme, reliant on confidence to maintain a steady inflow of cash.

He rewarded their faith handsomely; the stockmarket value of IMCO rose, according to *Foreign Affairs*, by 1,100% between 1923 and 1930. Even during the stockmarket crash of 1929, there was a mere hiccough before prices sailed higher. In 1931 a *New York Times* advertisement stored in the castle at Vadstena summoned investors to take part in an IMCO issue of $50m 5% convertible gold debentures. By then, it says, the company controlled 250 factories in 43 countries, many of which were operated under government-granted exclusivity. The resources, it said, were to expand capacity in Poland, as well as buying German, Turkish and other government bonds. The match business, it averred, by and large had “not suffered from the general business depression”.

The dazzling chutzpah with which Kreuger wheedled money out of American and other speculators was especially evident in the way he handled his companies' finances. It is here, perhaps, that Kreuger's misdirected genius finds its most powerful resonance today. A forthcoming book “The Match King” by Frank Partnoy, professor of law at the University of San Diego, will argue that the line of many of today's most dazzling financial innovations can be traced directly back to Kreuger. So can America's landmark Depression-era securities and accounting laws, which still shape the world of finance. So, too, can some of the most famous instances where those laws have been breached, such as the case of Enron, the collapsed American energy company.

Long before modern financiers created a market in asset-backed securities (the source of this year's turmoil) Kreuger was a master of the art. Effectively, the securities he sold to investors provided loans for governments secured against assets that he himself controlled. The assets were held offshore, which today's tax planners would welcome, and mostly off-balance sheet, the custom at Enron and many of the banks that have suffered this year. He invented the activist investor's dream of being able to control a company's destiny without owning it, by separating A shares from B shares (a practice until recently still common in Sweden). That enabled him, in Shaplen's estimation, to control a $600m empire with ownership of just 1% of the shares. He wrote the book on mystifying Enron-style accounting practices: when *Foreign Affairs* took a bold stab at exploring his accounts in 1930, it said the value of combined assets of all his companies was estimated at $630m. Of that, only $200m were match-related; another $400m were simply lumped together as “other investments” (it had $30m in the bank).

Like other free-wheeling entrepreneurs, Kreuger did not disguise his contempt for accounting norms. In a rare interview in 1929, he told Isaac Marcosson of New York's influential *Saturday Evening Post* that the key to his success was “silence, more silence, and even more silence”. (In a sycophantic letter to him found in Vadstena, Marcosson writes, “I regard it as a great privilege to be your Boswell.”) Secrecy, and his extensive network of paid informers around Europe, served him well; not only did it keep investors in the dark, but also enabled him to do deals with rival governments, such as republican France and fascist Italy, who loathed each other.

Yet amidst the telegrams and letters bundled in boxes in Vadstena, evidence of a growing concern about his affairs emerges after 1929 that suggests a cataclysm is in the making. By late 1931 Kreuger is, for the first time, unable to provide a colleague with a definite assurance on IMCO's dividend payments—the bedrock of the company's allure. A yellowing letter with frayed edges from one of his brokers at Lee, Higginson that year advises him, in unfailingly polite terms, that a couple of his bank creditors “insist that they are not as completely informed about the company as they should be”. Apologising for the imposition, his correspondent relays their request for what is meant in his accounts by “real-estate investments outside Sweden” and “other industrial shares”. In an eerie precursor of today's concerns about American subprime mortgages, he is asked to explain, too, what he means by “loans secured by real-estate mortgages”. Kreuger replies curtly that he is “greatly disappointed” by the attitude of the banks.

Corbis

An ignominious end

Kreuger's luck was running out, and his unswerving confidence was beginning to look like a con-man's desperate manoeuvring. Short-sellers were targeting his companies. Though he remained outwardly composed, a jotting on a cable reveals his private fears. “There is at present a bear attack going on and it is very important.”

The end, when it came, was quick. Desperate to keep his creditors at bay, he sought to arrange the merger of one of his companies, the Ericsson telecoms group, with America's International Telephone & Telegraph. With his back against the wall, he acceded to IT&T's request for an audit: they discovered a hole in his accounts.

In Sweden he was bailed out at the eleventh hour by a government which realised the economy was at risk from a Kreuger crash. But by this stage, he was promising as collateral assets that he had already pledged to others. A few creditors and colleagues believed there was one secret card remaining up his sleeve; the Italian government bonds (pictured above) he had locked in his safe in Stockholm.

Only Kreuger knew that he had personally falsified the signatures on the bonds. When it looked as though there was no alternative to owning up to the forgery, Kreuger walked to a gun-shop and bought a 9mm automatic pistol. That night, the man who had never married, who kissed women on the wrist rather than the hand for fear of germs, had a last tryst with a young Finnish girlfriend. The next day, lying on his bed in a pin-stripe suit, he shot himself, blowing out the last flicker of illusion in a hopeless age.

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Staying at the top

Mao and the art of management

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Corbis

A role model, of sorts

Books on management tend to define success in the broadest possible terms—great product, happy employees, continuous improvement, gobs of profits, crushed competitors. Even when words such as “excellence” and “success” are omitted from the title, they are often implicit. A case in point is the book which many would say defined the genre, Alfred Sloan's “My Years with General Motors”, published in 1963 when GM was still an iconic company and Sloan correctly acknowledged as the architect of the well-run, decentralised, global corporation.

But focusing on how the best produce the best has its limits. Most managers, after all, do not stitch an industrial triumph from a vast bankrupt junkyard, as Sloan did. They do not delight their customer, crush competitors and create vast wealth. They struggle. They stumble.

Where is the book for them? Who can help the under-performing, over-compensated chief executive fighting to survive intrusive journalists, independent shareholders and ambitious vice-presidents who could do a better job? Where is the role model for the manager who really needs a role model most—the one who by any objective measure of performance cannot, and should not, manage at all?

An obvious candidate is Mao. Yes, he was head of a country, not a company. But he self-consciously carried a business-like title, “chairman”, while running China from 1949 until dying in office in 1976, having jailed, killed, or psychologically crushed a succession of likely replacements and therefore created the classic business problem: a succession void. He thought of himself as, in his own words, an “indefatigable teacher” and the famous “Little Red Book” drawn from his speeches is packed with managerial advice on training, motivation and evaluation of lower-level employees (cadres); innovation (“let a hundred flowers bloom”); competition (“fear no sacrifice”); and, of course, raising the game of the complacent manager (relentless self-criticism).

Mao still has at least a symbolic hold over the Chinese economy, even though it began to blossom only after death removed his suffocating hand. His portrait is emblazoned on China's currency, on bags, shirts, pins, watches and whatever else can be sold by the innumerable entrepreneurial capitalists that he ground beneath his heel when in power. No other recent leader of a viable country (outside North Korea, in other words) is so honoured—not even ones that did a good job.

It was not a nurturing management style that won Mao this adulation. According to Jung Chang's and Jon Halliday's “Mao, the Unknown Story”, admittedly an unsympathetic portrait, he was responsible for “70m deaths, more than any other 20th-century leader”. But why stop at the 20th century? In Chinese history,

only Emperor Qin Shi Huang, who started building the Great Wall (in which each brick is said to have cost a life), was competition for Mao; and since the population was much smaller then, Mao is likely to have outdone him in absolute numbers.

Botched economic policies caused most of the carnage. Deng Xiaoping, Mao's successor, turned the policies, and eventually the economy, around. Yet he does not even merit an image on a coin.

The disparity between Mao's performance and his reputation is instructive, for behind it are four key ingredients which all bad managers could profitably employ.

• A powerful, mendacious slogan

Born a modestly well-off villager, Mao lived like an emperor, carried on litters by peasants, surrounded by concubines and placated by everyone. Yet his most famous slogan was “Serve the People”. This paradox illustrates one aspect of his brilliance: his ability to justify his actions, no matter how entirely self-serving, as being done for others.

Psychologists call this “cognitive dissonance”—the ability to make a compelling, heartfelt case for one thing while doing another. Being able to pull off this sort of trick is an essential skill in many professions. It allows sub-standard chief executives to rationalise huge pay packages while their underlings get peanuts (or rice).

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Alfred Sloan would have disapproved...

But Mao did not just get a stamp from a compliant board and eye-rolling from employees. He convinced his countrymen of his value. That was partly because, even if his message bore no relation to his actions, it expressed precisely and succinctly what he should have been doing. Consider the truth and clarity of “serve the people” compared with the average company's mission statement, packed with a muddle of words and thoughts tied to stakeholders and CSR, that employees can barely read, let alone memorise.

Deng Xiaoping's slogan, which he used in his campaign to revive the economy, had similar virtues. “Truth from facts” is a sound-bite that Sloan would have loved and every manager should cherish, but you won't find it chiselled on a Chinese wall. It doesn't have the hypocritical idealism of Mao's version—nor was it pushed so hard.

• Ruthless media manipulation

Mao knew not just how to make a point but also how to get it out. Through posters, the “Little Red Book” and re-education circles, his message was constantly reinforced. “Where the broom does not reach”, he said, “the dust will not vanish of itself.” This process of self-aggrandisement is often dismissed as a “personality cult”, but is hard to distinguish from the modern business practice of building brand value.

Yet within China economic growth was pathetic and living conditions were wretched. So why did a vast list of Western political, military and academic leaders accept the value of Mao's brand at his own estimation? Even Stalin, no guileless observer, believed in and, to his later regret, protected Mao. The brand-building lesson is that a clear, utopian message, hammered home relentlessly, can obscure inconvenient facts. Great salesmen are born knowing this. Executives whose strategies are not delivering need to learn it.

Chief executives are not in a position to crush the media as Mao did. Nevertheless, his handling of them offers some lessons. He talked only to sycophantic journalists and his appeal in the West came mainly from hagiographies written by reporters whose careers were built on the access they had to him.

The law constrains the modern chief executive's ability to imitate Mao's PR strategy. Publicly listed companies have to publish information, rather than hand it out selectively. But many, within bounds, emulate Mao's media management; others, determined to control information about them, are delisting. Burrow beneath laudatory headlines on business and political leaders, and it becomes clear that the strategy works.

• Sacrifice of friends and colleagues

“Who are our friends? Who are our enemies? This is a question of first importance,” Mao wrote. Sloan agreed. He worried that favouritism would come at the expense of the single most valuable component of management: the objective evaluation of performance.

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...but Mao's HR policies meant Happy Revolutionaries

Mao had a different goal: he did not want people too close to him, and therefore to power; so being Mao's friend often proved more dangerous than being his enemy. One purge followed another. Promotions and demotions were zealously monitored. Bundles of incentives were given and withdrawn. Some demotions turned out well. Deng Xiaoping's exile in a tractor factory may have helped him understand business, and thus rebuild the economy, but that was an unintended benefit.

This approach makes sense. Close colleagues may want your job, and relationships with them may distract you. Mao's abandonment of friends and even wives and children seemed to be based on a calculation of which investments were worth maintaining and which should be regarded as sunk costs. Past favours were not returned. According to Ms Chang and Mr Halliday, a doctor who saved his life was left to die on a prison floor after being falsely accused of disloyalty. Mao let it happen: he had other doctors by then.

Enemies, conversely, can be useful. Mao often blamed battlefield losses on rivals who were made to suffer for these defeats. The names of modern victims of this tactic will be visible on the list of people sacked at an investment bank after a rough quarter; the practitioners are their superiors, or those who have taken their jobs.

• Activity substituting for achievement

Mao was quite willing to avoid tedious or uncomfortable meetings, particularly when he was likely to be criticised. But maybe that helped him avoid getting bogged down. From the Anti-Rightist Movement of the late 1950s to the Great Leap Forward, a failed agricultural and industrial experiment in the early 1960s, to the Cultural Revolution in the late 1960s, Mao was never short of a plan.

Under Mao, China didn't drift, it careened. The propellant came from the top. Policies were poor, execution dreadful and leadership misdirected, but each initiative seemed to create a centripetal force, as everyone looked toward Beijing to see how to march forward (or avoid being trampled). The business equivalent of this is restructuring, the broader the better. Perhaps for the struggling executive, this is the single most important lesson: if you can't do anything right, do a lot. The more you have going on, the longer it will take for its disastrous consequences to become clear. And think very big: for all his flaws, Mao was inspiring.

In the long run, of course, the facts will find you out. But who cares? We all know what we are in the long run.

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Kitchens

Downstairs Upstairs

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MEPL

Women have not escaped the kitchen; it has come after them

THESE days, nobody needs to cook. Families graze on cholesterol-sodden take-aways and microwaved ready-meals. Cooking is an occasional hobby and a vehicle for celebrity chefs. Which makes it odd that, at the same time, the kitchen has become the heart of the modern house: what the great hall was to the medieval castle and the parlour was to the Victorian terrace, the kitchen is to the 21st-century home.

The money spent on them has risen with their status. In America the kitchen market is now worth $170 billion, according to the National Kitchen and Bath Association—five times the country's film industry. In the year to August 2007, IKEA, a Swedish furniture chain, sold over 1m kitchens worldwide. The average budget for a “major” kitchen overhaul in 2006, calculates *Remodeling* magazine, was a staggering $54,000; even a “minor” makeover cost on average $18,000.

Exclusivity, more familiar in the world of *haute couture*, has reached the kitchen: Robinson & Cornish, a British maker of bespoke kitchens, offers a Georgian-style one which would cost £145,000-155,000 ($290,000-310,000)—excluding building, plumbing and electrical work. Its big selling point, the publicity suggests, is that nobody else will have it: “You won't see this kitchen in *Hello*.”

Estate agents commonly use photographs of kitchens to sell properties. Celebrity chefs slice, steam and sear in aspirational culinary shrines of stainless steel and high gloss. An entire genre of television reality shows has grown up to supply ideas for turning that pokey back room into a place of cherry wood cabinets, polished granite and brushed aluminium.

The elevation of the room that once belonged only to the servants to that of design showcase for the modern family tells the story of a century of social change. Right into the early 20th century, kitchens were smoky, noisy places, generally relegated underground, or to the back of the house, and as far from living space as possible. That was as it should be: kitchens were for servants, and the aspiring middle classes wanted nothing to do with them.

Royalty ran them on an industrial scale. Henry VIII extended the Tudor kitchens at Hampton Court Palace

into 55 rooms, covering over 3,000 square feet (280 square metres). These included the great kitchen, privy kitchen, cellar, larder, pantry, buttery, ewery, saucery, chaundry, spicery, poultery and victualling house. They were staffed by 200 people, serving 600 meals a day. In one year during Elizabeth I's reign, according to records at Hampton Court, the royal kitchens roasted 1,240 oxen, 8,200 sheep, 2,330 deer, 760 calves, 1,870 pigs and 53 wild boar.

The scale was more modest but the principles the same for the middle class. The Victorian and Edwardian kitchen was organised for live-in servants, which were plentiful in England, as they were in America until the civil war. Only the poor and the servants ate in the kitchen. The master of the house scarcely set foot beyond the green baize door; the mistress only to supervise. The kitchen's comfort, let alone its aesthetics, were of little concern to them.

But as the working classes prospered and the servant shortage set in, housekeeping became a matter of interest to the literate classes. One of the pioneers of a radical new way of thinking about the kitchen was Catharine Esther Beecher, sister of Harriet Beecher Stowe, the abolitionist. In “American Woman's Home”, published in 1869, the Beecher sisters recommended a scientific approach to household management, designed—with puritanical zeal—to enhance the efficiency of a woman's work, and promote order.

> A full supply of all conveniences in the kitchen and cellar, and a place appointed for each article, very much facilitate domestic labour. For want of this, much vexation and loss of time is occasioned while seeking vessels in use, or in cleansing those employed by different persons for various purposes.

No corner of the kitchen escaped Catharine Beecher's critical eye, nor the precision of her advice. She recommended the construction of cupboards, shelves and drawers adapted to each sort of utensil. She favoured a work-table with built-in drawers, in order “to save many steps”. She advised a “grooved dish drainer” for the sink, an ingenious idea at the time. She included detailed instructions for hanging dish cloths, stressing that these should be hung on three separate nails over the sink: one for greasy dishes, one for non-greasy dishes, and one for pots and kettles. “A housekeeper who chooses to do without some of these conveniences”, she wrote, “and spend the money saved in parlour adornments, has a right to do so, and others have a right to think she in this shows herself deficient in good sense.”

Many contemporary ideas about kitchen design can be traced back to another American, Christine Frederick, who set about enhancing the efficiency of the housewife. Her 1919 work, “Household Engineering: Scientific Management in the Home”, and her articles for the *Ladies Home Journal* on radical notions such as “Suppose our servants didn't live with us?”, were based on detailed observation of a housewife's daily routine. A zealous advocate of Taylorism, she borrowed the principle of efficiency on the factory floor and applied it to domestic tasks on the kitchen floor. On dishwashing, for instance, she noted the following:

> Usually after our dinner I wash forty-eight pieces of china, twenty-two pieces of silver and ten utensils and pots, or eighty pieces in all; and for years I never realized that I actually made eighty wrong motions in the washing alone, not counting others in the sorting, wiping and laying away. Like all other women I thought that there couldn't be much improvement in the same old task of washing dishes.

How wrong she was. It turned out that her sink was too low (the “stupidity of builders”, she sighed); for every five extra inches in a woman's height, she calculated, the sink should be raised by two and a half inches. She repositioned the draining board, moved the drying towels, and scraped her plates more thoroughly before washing. Thus a 45-minute operation was reduced to a mere 30.

Frederick's central idea, that “stove, sink and kitchen table must be placed in such a relation that useless steps are avoided entirely”, directly informs modern kitchen design, based on the “work triangle” between fridge, cooker and sink. It also inspired the first fully fitted kitchen, designed in the 1920s by Margarete Schütter-Lihotsky. She developed the “Frankfurt kitchen” for social housing in the city, its size—1.9m by 3.4m—and layout determined by a time-and-motion study. It was a modernist triumph, and many elements—the L-shaped work surface, head-height rows of built-in cupboards, an extractor hood above the cooker—remain central features of today's kitchen.

Bob, Betty and Jamie

In the 1920s, three factors ushered in the modern kitchen. One was the influence of the European modernist movement, led by Bauhaus architects in Germany and Le Corbusier in France. Another was the development of electrical appliances. General Electric was promoting all manner of newfangled equipment, including the electric refrigerator, automatic clothes washer, pop-up toaster, electric coffee percolator, electric iron and automatic suction sweeper. Finally, the rising cost of servants boosted demand for such labour-saving devices. Lorain Gas Ranges advertised their new oven thermostat in 1926 as “The Answer to the Servant Problem”.

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All's swell in the kitchen

The kitchen by the 1930s became a showcase for the middle-class home, its newest appliances badges of status. Magazines explained how to introduce flair and colour. A woman was taught to fulfil her dreams through her kitchen. In 1936 Monel Metal, an American kitchen manufacturer, advertised a new model with a photograph of Betty, newly wed, apron already securely fastened around her waist. Her hands happily plunged into soapsuds, she gazes gratefully at her husband, Bob, under the headline: “She wouldn't take No for an answer”. “Said Betty to Bob one day,” reads the ad, “wouldn't it be wonderful if we could have a bright and shining kitchen—with everything matching in Monel Metal?”“Swell,” he replies, but fears it will cost too much. She discovers otherwise. He is seduced. She gets her kitchen.

It took post-war prosperity, suburban living and Formica to finish off the kitchen's coming of age. By the 1950s, in newly built houses, the kitchen was promoted to the front of the house, allowing the housewife to anticipate cheerily her husband's return. The kitchen had taken central place in the American dream.

Yet the kitchen remained a place for cooking, and thus principally for women. As Ellen Plante, author of a history of the American kitchen, points out, its revival as a hub of the home did not take place until women joined the workforce in big numbers, during the 1970s and 1980s. Working mothers were decreasingly keen to cook—hence the rise of the takeaway—but still had to prepare meals, and they did not want to spend their evenings slaving away in a space cut off from the rest of the family.

Out went the idea of the kitchen as service area, where housewives scrubbed, chopped and boiled. In came the open family space, where friends hovered, teenagers grazed and children did homework. Its early incarnation, in the late 1970s and 1980s, was often “country-style” or “farmhouse”, all oak, orange Le Creuset casserole dishes, and often centred on the AGA cooker, as urban women, shuttling between the office and the home, tried to recover something of the pre-industrial age of hearth, flagstone and pantry.

The farmhouse style still sells well, even in New York and London, where it seems to speak to some nostalgic yearning among urban families. Some of the priciest hand-built English kitchens today are a cleaner, less fussy, often Shaker-inspired, version of the farmhouse kitchen. In a 2004 study in Britain, June Freeman, a sociologist, found that the farmhouse kitchen, of natural wood and terracotta, was the preferred model for 41% of her sample, beating hands down the designer kitchen in “high-gloss aubergine and black lacquer”, which only 11% favoured.

So the kitchen has come full circle. As Ms Plante puts it: “In the early Colonial kitchen, with its massive

cooking hearth, the family gathered together for meals, conversation and home-related activities." Today's lived-in kitchen, the central set for much TV drama, from "The Sopranos", to "Desperate Housewives", is not so different. "People want to express themselves through their kitchens," says Jesper Brodin, global head of kitchens at IKEA: "Today, the dream of an open living kitchen designed for social use is universal."

Certainly, European kitchen suppliers are thriving internationally. At Bulthaup, an upmarket German supplier, sales of kitchens in Asia tripled in the year to April 2007. Kitchens by Poggenpohl, another smart German brand, are selling well in Dubai, Shanghai and Istanbul; it recently opened a showroom in Nairobi, Kenya. In the middle market too, IKEA is busy spreading flat packs and frustration into all corners of the globe: in 2008 it plans to add two more stores in China to the four it already runs there, for instance, and four more to its eight stores in Russia.

Brand-conscious Russians, it seems, are happy to have their taste dictated by design gurus in Stockholm and London. But if Americans and northern Europeans seek timelessness in natural wood, the newly rich Chinese and Russians tend to think high-gloss surfaces are a better reflection of modern designer living.

Even in the poorest parts of the world, a modern kitchen seems to have particular aspirational value. Tim Dirven, a Belgian photographer, came across a bizarre but powerful illustration of this at a street photographer's stall in a dusty run-down district of Kinshasa, the capital of Congo. Of all the pictures that customers could choose as a background to be photographed against, the most popular was a bright yellow and blue European-style fitted kitchen.

The cult of the social kitchen has its limits, however. In China and Japan, modern city flats are usually too small to make a lived-in kitchen practical. IKEA says that its Chinese customers are concerned chiefly with how to make the most of small cooking spaces, not with creating open-plan areas. IKEA's Mr Brodin says smoky wok-cooking also makes the open kitchen less appealing there. According to a 27-country survey for IKEA by IsoPublic, a polling firm, less than 20% of Chinese families eat in the kitchen compared with 64% of Canadian and over 50% of American ones.

The more traditional family roles are, the less likely the kitchen is to be used as a living area. In Sweden, 30% of households say that the man is the main cook, and nearly two-thirds of families socialise in their kitchen, according to IsoPublic. At the other end of the scale, less than 5% of Saudis use their kitchen socially, and a man is the main cook in just 3% of households.

The French too seem to be reluctant to bash down the kitchen wall and let their guests in. In the land of gastronomy, separate dining-rooms remain common—and an open well-designed kitchen is known as *une cuisine américaine*. In Paris, the architecture of 19th-century apartments, combined with a formal eating culture, has generally kept the kitchen hidden away at the end of a narrow corridor, overlooking a gloomy interior courtyard. The French, along with the Portuguese and Spanish, do the least socialising in the kitchen among western Europeans—half as much as Swedes and Finns. Despite the fashion for open kitchens in new designer gourmet restaurants in Paris, food-preparation in the home is still often considered an art to be mastered backstage.

Shirley Conran, a British feminist writer, famously declared in the 1970s that "Life's too short to stuff a mushroom." Throwing off the apron was the first step to a woman's freedom. Today, for some working women, the celebration of gastronomy, and its accompanying cult of the kitchen, is in turn a liberation from this anti-domesticity creed. At last, it is acceptable to know how to bake brownies as well as read a balance sheet. For others, though, it is simply a new form of domestic enslavement. Not only do women now have to climb the professional ladder but they are expected to be domestic divas too.

Professional designers reckon that the kitchen of the future will be a more egalitarian place. Women may still be the main cook in 77% of kitchens, according to the IsoPublic survey, but men increasingly spend time there too. Mintel, a market-research group, suggests that British men have been inspired to put on their aprons by male celebrity chefs, such as Jamie Oliver and Gordon Ramsay. Kitchen catalogues show today's Bob and Betty cheerfully chopping together in domestic bliss.

Kitchen manufacturers are responding with a cool, harder-edged look, designed to appeal to masculine taste. Poggenpohl is shortly to introduce a new model designed specially for men, in aluminium, dark gloss and glass—a "sleek and functional design language specifically addresses male customers". It comes complete with an in-built high-tech audio-visual system. It even includes a cooker.

Appliance manufacturers are also beaming music, TV and the internet into the

kitchen, in part to meet what are considered male demands. Various manufacturers have introduced a digital TV refrigerator, with a built-in LCD screen on the fridge door. Electrolux has a model with an internet screen built in above the fridge doors, complete with a bar-code-detected food stockage and ordering system.

Kitchen manufacturers are responding with a cool, harder-edged look, designed to appeal to masculine taste

What with wireless and digital entertainment zones, kitchens have come a long way from the era of the open fire and blackened pot. Kitchen designers plainly think that the lure of state-of-the-art multi-media gadgetry will pull more men into the kitchen in the future. And they may well be right. But whether they go there in order to stuff a mushroom, or rather to download music and stick a frozen chicken tikka in the microwave, is probably an open question.

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Hunter-gatherers

Noble or savage?

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The era of the hunter-gatherer was not the social and environmental Eden that some suggest

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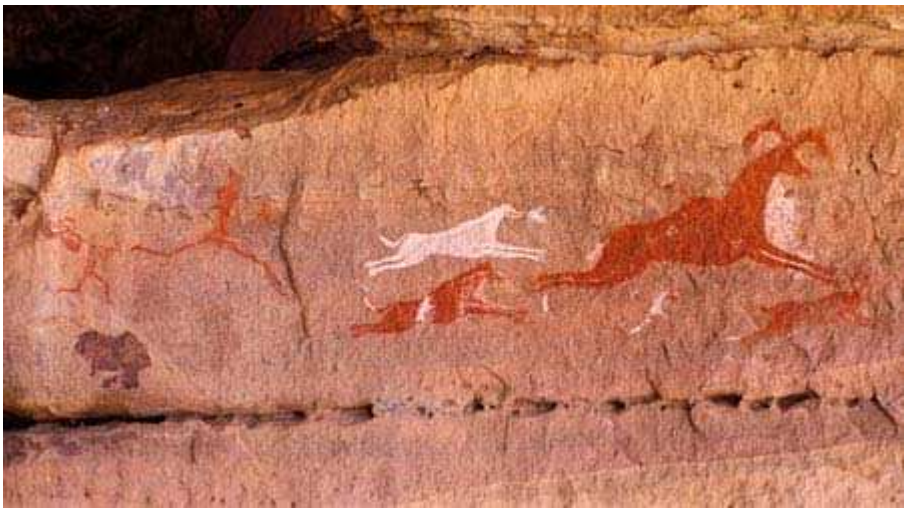

HUMAN beings have spent most of their time on the planet as hunter-gatherers. From at least 85,000 years ago to the birth of agriculture around 73,000 years later, they combined hunted meat with gathered veg. Some people, such as those on North Sentinel Island in the Andaman Sea, still do. The Sentinelese are the only hunter-gatherers who still resist contact with the outside world. Fine-looking specimens—strong, slim, fit, black and stark naked except for a small plant-fibre belt round the waist—they are the very model of the noble savage. Genetics suggests that indigenous Andaman islanders have been isolated since the very first expansion out of Africa more than 60,000 years ago.

About 12,000 years ago people embarked on an experiment called agriculture and some say that they, and their planet, have never recovered. Farming brought a population explosion, protein and vitamin deficiency, new diseases and deforestation. Human height actually shrank by nearly six inches after the first adoption of crops in the Near East. So was agriculture “the worst mistake in the history of the human race”, as Jared Diamond, evolutionary biologist and professor of geography at the University of California, Los Angeles, once called it?

Take a snapshot of the old world 15,000 years ago. Except for bits of Siberia, it was full of a new and clever kind of people who had originated in Africa and had colonised first their own continent, then Asia, Australia and Europe, and were on the brink of populating the Americas. They had spear throwers, boats, needles, adzes, nets. They painted pictures, decorated their bodies and believed in spirits. They traded foods, shells, raw materials and ideas. They sang songs, told stories and prepared herbal medicines.

They were “hunter-gatherers”. On the whole the men hunted and the women gathered: a sexual division of labour is still universal among non-farming people and was probably not shared by their *Homo erectus* predecessors. This enabled them to eat both meat and veg, a clever trick because it combines quality with reliability.

Why change? In the late 1970s Mark Cohen, an archaeologist, first suggested that agriculture was born of desperation, rather than inspiration. Evidence from the Fertile Crescent seems to support him. Rising human population density, combined perhaps with a cooling, drying climate, left the Natufian hunter-gatherers of the region short of acorns, gazelles and wild grass seeds. Somebody started trying to preserve and enhance a field of chickpeas or wheat-grass and soon planting, weeding, reaping and threshing were born.

Quite independently, people took the same step in at least six other parts of the world over the next few thousand years: the Yangzi valley, the central valley of New Guinea, Mexico, the Andes, West Africa and the Amazon basin. And it seems that Eden came to an end. Not only had hunter-gatherers enjoyed plenty of protein, not much fat and ample vitamins in their diet, but it also seems they did not have to work very hard. The Hadza of Tanzania “work” about 14 hours a week, the !Kung of Botswana not much more.

The first farmers were less healthy than the hunter-gatherers had been in their heyday. Aside from their shorter stature, they had more skeletal wear and tear from the hard work, their teeth rotted more, they were short of protein and vitamins and they caught diseases from domesticated animals: measles from cattle, flu from ducks, plague from rats and worms from using their own excrement as fertiliser.

They also got a bad attack of inequality for the first time. Hunter-gatherers' dependence on sharing each other's hunting and gathering luck makes them remarkably egalitarian. A successful farmer, however, can afford to buy the labour of others, and that makes him more successful still, until eventually—especially in an irrigated river valley, where he controls the water—he can become an emperor imposing his despotic whim upon subjects. Friedrich Engels was probably right to identify agriculture with a loss of political innocence.

Agriculture also stands accused of exacerbating sexual inequality. In many peasant farming communities, men make women do much of the hard work. Among hunter-gathering folk, men usually bring fewer calories than women, and have a tiresome tendency to prefer catching big and infrequent prey so they can show off, rather than small and frequent catches that do not rot before they are eaten. But the men do at least contribute.

Recently, though, anthropologists have subtly revised the view that the invention of agriculture was a fall from grace. They have found the serpent in hunter-gatherer Eden, the savage in the noble savage. Maybe it was not an 80,000-year camping holiday after all.

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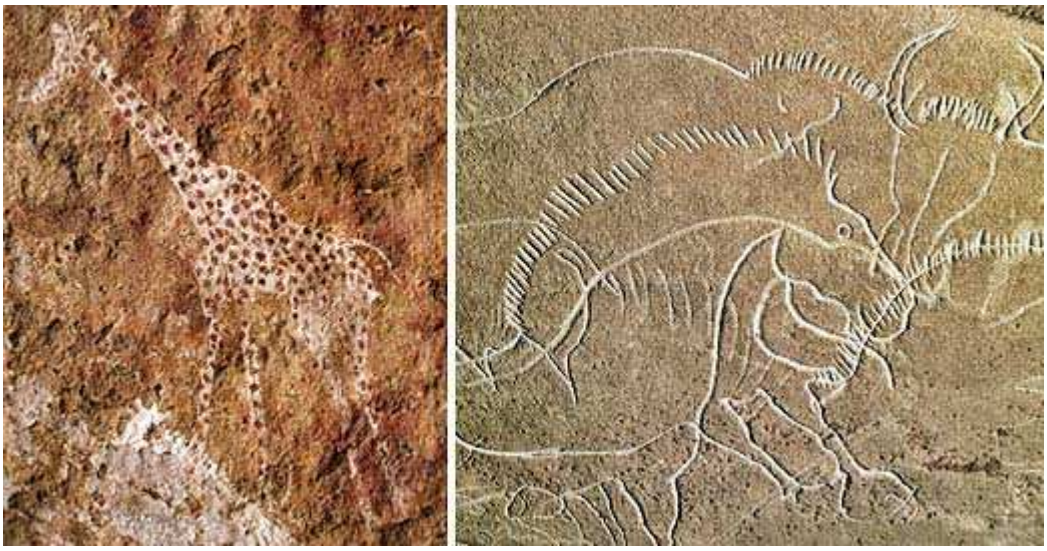

In 2006 two Indian fishermen, in a drunken sleep aboard their little boat, drifted over the reef and fetched up on the shore of North Sentinel Island. They were promptly killed by the inhabitants. Their bodies are still there: the helicopter that went to collect them was driven away by a hail of arrows and spears. The Sentinelese do not welcome trespassers. Only very occasionally have they been lured down to the beach of their tiny island home by gifts of coconuts and only once or twice have they taken these gifts without sending a shower of arrows in return.

Several archaeologists and anthropologists now argue that violence was much more pervasive in hunter-gatherer society than in more recent eras. From the
!Kung in the Kalahari to the Inuit in the Arctic and the aborigines in Australia, two-thirds of modern hunter-gatherers are in a state of almost constant tribal warfare, and nearly 90% go to war at least once a year. War is a big word for dawn raids, skirmishes and lots of posturing, but death rates are high—usually around 25-30% of adult males die from homicide. The warfare death rate of 0.5% of the population per year that Lawrence Keeley of the University of Illinois calculates as typical of hunter-gatherer societies would equate to 2 billion people dying during the 20th century.

At first, anthropologists were inclined to think this a modern pathology. But it is increasingly looking as if it is the natural state. Richard Wrangham of Harvard University says that chimpanzees and human beings are the only animals in which males engage in co-operative and systematic homicidal raids. The death rate is similar in the two species. Steven LeBlanc, also of Harvard, says Rousseauian wishful thinking has led academics to overlook evidence of constant violence.

MEPL

I know it's a drag Godric, but it's progress

Not so many women as men die in warfare, it is true. But that is because they are often the object of the fighting. To be abducted as a sexual prize was almost certainly a common female fate in hunter-gatherer society. Forget the Garden of Eden; think Mad Max.

Constant warfare was necessary to keep population density down to one person per square mile. Farmers can live at 100 times that density. Hunter-gatherers may have been so lithe and healthy because the weak were dead. The invention of agriculture and the advent of settled society merely swapped high mortality for high morbidity, allowing people some relief from chronic warfare so they could at least grind out an existence, rather than being ground out of existence altogether.

Notice a close parallel with the industrial revolution. When rural peasants swapped their hovels for the textile mills of Lancashire, did it feel like an improvement? The Dickensian view is that factories replaced a rural idyll with urban misery, poverty, pollution and illness. Factories were indeed miserable and the urban poor were overworked and underfed. But they had flocked to take the jobs in factories often to get away from the cold, muddy, starving rural hell of their birth.

Homo sapiens wrought havoc on many ecosystems as Homo erectus had not

Eighteenth-century rural England was a place where people starved each spring as the winter stores ran out, where in bad years and poor districts long hours of agricultural labour—if it could be got—barely paid enough to keep body and soul together, and a place where the “putting-out” system of textile manufacture at home drove workers harder for lower pay than even the factories would. (Ask Zambians today why they take ill-paid jobs in Chinese-managed mines, or Vietnamese why they sew shirts in multinational-owned factories.) The industrial revolution caused a population explosion because it enabled more babies to survive—malnourished, perhaps, but at least alive.

Returning to hunter-gatherers, Mr LeBlanc argues (in his book “Constant Battles”) that all was not well in ecological terms, either. *Homo sapiens* wrought havoc on many ecosystems as *Homo erectus* had not. There is no longer much doubt that people were the cause of the extinction of the megafauna in North America 11,000 years ago and Australia 30,000 years before that. The mammoths and giant kangaroos never stood a chance against co-ordinated ambush with stone-tipped spears and relentless pursuit by endurance runners.

This was also true in Eurasia. The earliest of the great cave painters, working at Chauvet in southern France, 32,000 years ago, was obsessed with rhinoceroses. A later artist, working at Lascaux 15,000 years later, depicted mostly bison, bulls and horses—rhinoceroses must have been driven close to extinction by then. At first, modern human beings around the Mediterranean relied almost entirely on large mammals for meat. They ate small game only if it was slow moving—tortoises and limpets were popular. Then, gradually and inexorably, starting in the Middle East, they switched their attention to smaller animals, and especially to warm-blooded, fast-breeding species, such as rabbits, hares, partridges and smaller gazelles. The archaeological record tells this same story at sites in Israel, Turkey and Italy.

Bridgeman Art Library

Another fine environmental mess we've got ourselves into

The reason for this shift, say Mary Stiner and Steven Kuhn of the University of Arizona, was that human population densities were growing too high for the slower-reproducing prey such as tortoises, horses and rhinos. Only the fast-breeding rabbits, hares and partridges, and for a while gazelles, could cope with such hunting pressure. This trend accelerated about 15,000 years ago as large game and tortoises disappeared from the Mediterranean diet altogether—driven to the brink of extinction by human predation.

In times of prey scarcity, *Homo erectus*, like other predators, had simply suffered local extinction; these new people could innovate their way out of trouble—they could shift their niche. In response to demographic pressure, they developed better weapons which enabled them to catch smaller, faster prey, which in turn enabled them to survive at high densities, though at the expense of extinguishing many larger and slower-breeding prey. Under this theory, the *atlatl* or spear-throwing stick was invented 18,000 years ago as a response to a Malthusian crisis, not just because it seemed like a good idea.

What's more, the famously “affluent society” of hunter-gatherers, with plenty of time to gossip by the fire between hunts and gathers, turns out to be a bit of a myth, or at least an artefact of modern life. The measurements of time spent getting food by the !Kung omitted food-processing time and travel time, partly because the anthropologists gave their subjects lifts in their vehicles and lent them metal knives to process food.

Soon collecting wild grass seeds evolved into planting and reaping crops, which meant fewer proteins and vitamins but ample calories

Agriculture was presumably just another response to demographic pressure. A new threat of starvation—probably during the millennium-long dry, cold “snap” known as the Younger Dryas about 13,000 years ago—prompted some hunter-gatherers in the Levant to turn much more vegetarian. Soon collecting wild grass seeds evolved into planting and reaping crops, which reduced people's intake of proteins and vitamins, but brought ample calories, survival and fertility.

The fact that something similar happened six more times in human history over the next few thousand years—in Asia, New Guinea, at least three places in the Americas and one in Africa—supports the notion of invention as a response to demographic pressure. In each case the early farmers, though they might be short, sick and subjugated, could at least survive and breed, enabling them eventually to overwhelm the remaining hunter-gatherers of their respective continents.

It is irrelevant to ask whether we would have been better off to stay as hunter-gatherers. Being a niche-shifting species, we could not help moving on. Willingly or not, humanity had embarked 50,000 years ago on the road called “progress” with constant change in habits driven by invention mothered by necessity. Even 40,000 years ago, technology and lifestyle were in a state of continuous change, especially in western Eurasia. By 34,000 years ago people were making bone points for spears, and by 26,000 years ago they were making needles. Harpoons and other fishing tackle appear at 18,000 years ago, as do bone spear throwers, or *atlatls*. String was almost certainly in use then—how do you catch rabbits except in nets and snares?

Nor was this virtuosity confined to practicalities. A horse, carved from mammoth-ivory and worn smooth by being used as a pendant, dates from 32,000 years ago in Germany. By the time of Sungir, an open-air settlement from 28,000 years ago at a spot near the city of Vladimir, north-east of Moscow, people were being buried with thousands of laboriously carved ivory beads and even little wheel-shaped bone ornaments.

Incessant innovation is a characteristic of human beings. Agriculture, the domestication of animals and plants, must be seen in the context of this progressive change. It was just another step: hunter-

gatherers may have been using fire to encourage the growth of root plants in southern Africa 80,000 years ago. At 15,000 years ago people first domesticated another species—the wolf (though it was probably the wolves that took the initiative). After 12,000 years ago came crops. The internet and the mobile phone were in some vague sense almost predestined 50,000 years ago to appear eventually.

There is a modern moral in this story. We have been creating ecological crises for ourselves and our habitats for tens of thousands of years. We have been solving them, too. Pessimists will point out that each solution only brings us face to face with the next crisis, optimists that no crisis has proved insoluble yet. Just as we rebounded from the extinction of the megafauna and became even more numerous by eating first rabbits then grass seeds, so in the early 20th century we faced starvation for lack of fertiliser when the population was a billion people, but can now look forward with confidence to feeding 10 billion on less land using synthetic nitrogen, genetically high-yield crops and tractors. When we eventually reverse the build-up in carbon dioxide, there will be another issue waiting for us.

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18th-century climate change

The summer of acid rain

Dec 19th 2007

NaturePL

Molten iron raining down like cowpats; ice floes at New Orleans. The weather of 1783 was an extraordinary case of sudden climate change driven by atmospheric gases

“AROUND mid-morning on Pentecost, June 8th of 1783, in clear and calm weather, a black haze of sand appeared to the north of the mountains. The cloud was so extensive that in a short time it had spread over the entire area and so thick that it caused darkness indoors. That night, strong earthquakes and tremors occurred.”

Thus begins the eyewitness account of one of the most remarkable episodes of climate change ever seen. It was written by a Lutheran priest, Jon Steingrimsson, in the Sida district of southern Iceland. At nine o'clock that morning, the earth split open along a 16-mile fissure called the Laki volcano. Over the next eight months, in a series of vast belches, more lava gushed through the fissure than from any volcano in historic times—15 cubic kilometres, enough to bury the whole island of Manhattan to the top of the Rockefeller Centre.

Pentecost is the Christian festival celebrating the appearance of the Holy Spirit to the Apostles with the sound, the Bible says, “as of a mighty rushing wind” and an appearance “like as of fire”. But there was nothing metaphorical or festive about the winds and fire of the Laki eruption. It was the greatest calamity in Iceland's history.

“The flood of fire”, Steingrimsson writes, “flowed with the speed of a great river swollen with meltwater on a spring day.” It was rather as if the world's largest steelworks had begun pouring molten metal all over the neighbourhood. When the lava stream ran into water or marshes, “the explosions were as loud as if many cannon were fired at one time.” When it hit an obstacle, such as older lava fields, great gouts of molten metal were flung in the air, splashing back to earth, he says, “like cowpats”. But the damage to Iceland was only the start of a much greater trail of destruction that was eventually to reach halfway round the world, from the Altai mountains of Siberia to the Gulf of Mexico.

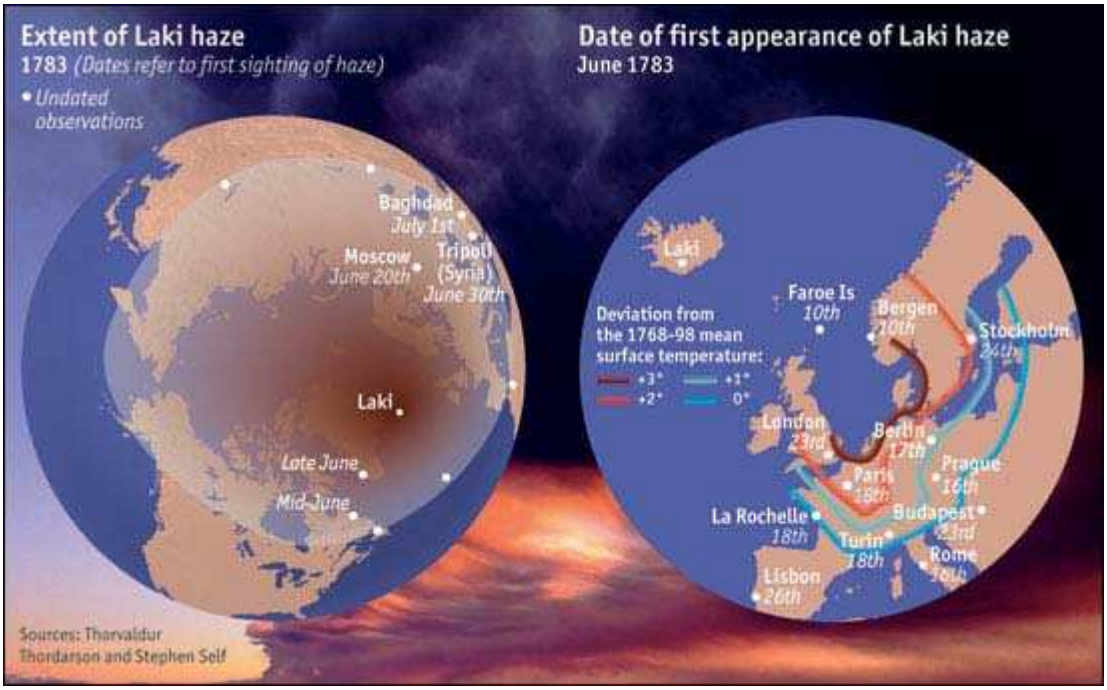
There are two sorts of volcanic eruptions, explosive and effusive. The well-known sort is explosive. It has the greater force. Explosions of this sort destroyed Pompeii and star in Hollywood films. Their sheer power throws volcanic gases and ash far into the stratosphere (the higher reaches of the atmosphere), where they absorb incoming radiation and cool the earth until they dissipate after two or three years. The eruption of Krakatoa caused record snowfalls round the world.

Effusive volcanic eruptions are different. They simmer with less force, but produce a greater volume of

debris. Laki belched out clouds of volcanic gases 80 times greater than Mount St Helens, though Mount St Helens had much greater explosive power. But because Laki was weaker, three-quarters of the gas reached only as far as the lower atmosphere (the troposphere), the level at which rain, ordinary clouds and surface winds are carried. The gases included enormous quantities of sulphur dioxide; at its peak, the eruption produced as much in two days as European industry produces in a year. Part of this dissolved in the vapour of the clouds to form sulphuric acid. Within a few hours, the Laki volcano had produced a vast plume of acid rain, brooding over the skies of southern Iceland.

In the normal course of events, the prevailing winds would have blown this poisonous plume northwards, towards the Arctic Circle. But the summer of 1783 was not normal. A stable ridge of high pressure had settled over north-east Europe, pulling the winds, and the Laki cloud, south-east, towards the European mainland.

What happened next can be recreated in great detail because in the late 18th century diaries were fashionable among the newly literate middle classes and the circulation of newspapers was rising even in small towns; there was also growing scientific interest in the natural world, with educated amateurs keeping detailed notes of natural phenomena. From such records, one can track the course of the Laki cloud literally day by day (see map).



On June 10th wrote Sæmundur Magnusson Holm at the University of Copenhagen, falling ash coloured black the deck and sails of ships travelling to Denmark. The same day, a Lutheran priest in Norway, Johan Brun, reported that falling ash had withered the grass and leaves in Bergen. Six days later, Anton Strnadt reported that “the dry fog” came up over the river Moldau into Prague while Nicolas von Beguelin reported its first appearance in Berlin the day afterwards. “The sun”, he wrote, “was dull in its shine and coloured as if it had been soaked in blood.”

By June 18th the winds seem to have been blowing the cloud south and west. Robert de Lamanon, a French botanist and explorer, wrote from Laon, in northern France, that “the fog was cold and humid, with the wind coming from the south, and one could with ease look at the sun with a telescope without a blackened lens.” De Lamanon said fog—“such as the oldest men here have not seen before”—first appeared that day in Paris, Turin and Padua, from where Giuseppe Toaldo wrote that the whole of northern Italy was covered by the haze and smelled of sulphur.

The first mention of the haze in Britain came on June 22nd when Henry Bryant wrote to the *Norfolk Chronicle* that “there was an uncommon gloom in the air, with dead calm and very profuse dew.” Gilbert White, a Hampshire clergyman, noted in his diaries for the 23rd that “the blades of wheat in several fields are turned yellow and look as if scorched with frost.”

By June 26th Leonhard Euler, a Swiss mathematician, reported a “dry fog” in St Petersburg. By the end of the month, the cloud had reached Moscow and Tripoli in Syria, according to a Dutch professor, S.P. van Swinden, whose “Observations on the Cloud which Appeared in 1783” says that “a very thick haze

covered both land and sea; the sun could be seen rarely, and always with a bloody colour, which was rare in Syria." Finally, on July 1st, the haze appeared at Baghdad and in the Altai mountains, according to a geologist, Ivan Michaelovich Renovantz, who reported unseasonable frosts in Central Asia.

By then, back in Europe, the cloud had thickened. This was not a plume like that from Chernobyl, which appeared in one vast belch, spread over Europe and blew away. After its initial effusion, Laki erupted again, more violently, on June 11th and with still greater force on the 14th. Ferenc Weiss, a Hungarian meteorologist, was right to speculate that "the thick fog was being continually replenished". There were to be ten big eruptions between June 8th and the end of October, followed by a series of rumblings that exhausted themselves only in February 1784.

As the cloud approached western Europe, it was sucked down in a spiral pattern towards the Earth's surface, producing a thick haze near ground level. By mid-summer, the "dry fog" had settled on Europe like a blanket; it was to stay there throughout the summer.

Europeans reacted in different ways. Steingrimsson was in no doubt: the eruption was "the Lord's chastisement". On the fourth Sunday after Pentecost, with the lava advancing down the valley towards his church "which was shaking and quaking from the cataclysm", he gathered his flock for Sunday service, as usual. "Both myself and all the others in the church were completely unafraid," he writes. "No one showed any signs of leaving during the service, which I had made slightly longer than usual." On emerging, the congregation found that two rivers, blocked by the lava flow, had changed course and poured down, dousing the lava and stopping it yards from the church door. (Two centuries later, Icelanders created the same obstacle by artificial means to save a town threatened by another eruption.) "From this day onwards the fire did no major damage to my parish in any way."

"The miracle of the fire sermon" became well known and sermons on the freakish cloud common. "You stare at the sky and at the horizon veiled in dark exhalations," Johann Georg Gottlob Schwarz admonished his audience in Alsfeld, Germany. "The Lord speaks daily to us and reveals in Nature his omniscience."

The end is nigh

The expressions of faith were driven partly by alarm, even terror. "Some fear to go to bed, expecting an Earthquake; some declare that [the sun] neither rises nor sets where he did, and assert with great confidence that the day of judgment is at hand," wrote an English poet, William Cowper. Parishioners near Broué, in northern France, dragged their priest out of bed and forced him to perform a rite of exorcism on the cloud. After rains brought temporary relief in Antwerp, the *Gazette van Antwerpen* reported that public prayers were held to bring more.

Alarm and misapprehension were not confined to the illiterate. The British government, fearing a plague outbreak, drew up plans to close the ports to traffic from the continent. Nor were popular fears mere superstition. The parish records of the English midlands reveal a spike in the number of deaths during July and August 1783, though summer is normally the time of lowest mortality in agricultural societies. Around 23,000 more English people died than would have been expected that year, doubling the normal death toll. In France, on some estimates, 5% of the population died that summer. Unusually, the deaths included young men and women working in the fields, breathing polluted air in stifling heat.

In Japan, the famine was so severe that special crews had to be hired to clear the roads of the dead

In general, though, "the Connoscenti", (Cowper's term) sought rational explanations for the haze, rather than the consolations of religion. A French naturalist was the first to connect the fog to volcanic activity in Iceland in a lecture at Montpellier as early as August 7th. In Paris, meteorologists "desirous of making some observations of the atmosphere, had a sort of kite flown to a great height after which it was drawn in, covered with innumerable small black insects." In an apparent attempt to allay panic, a French astronomer, Jerome de Lalande, wrote a paper arguing the unusual weather was "nothing more than the very natural effect from a hot sun after a long supersession of heavy rain" (he was wrong). Everywhere, educated men left detailed descriptions of the cloud cover; of the unusual appearance of the sun ("ferruginous" said White; "the face of a hot salamander" said Cowper); and of the scorching of leaves and grass and the state of the harvest and livestock.

By the end of October, the last of the big eruptions at Laki was over, and the haze began to dissipate,

blown by the autumn winds. It was the end of the cloud but not the end of the damage. One of the gases the volcano threw up was fluorine, which fell quickly back to earth as hydrofluoric acid. In Iceland, this had horrible results. “The horses lost all their flesh,” Steingrimsson wrote, “the skin began to rot off along the spines. The sheep were affected even more wretchedly. There was hardly a part on them free of swellings, especially their jaws, so large that they protruded through the skin...Both bones and gristle were as soft as if they had been chewed.”

Half the horses and cattle and three-quarters of the sheep on the island died. As famine took hold, social bonds began to fray. To protect his remaining cattle, Steingrimsson slept in the cowshed “since thieves were on the prowl.” In all, a quarter of Iceland's population was to die of starvation, including Steingrimsson's beloved wife of 31 years. “When I lost my wonderful wife”, he writes, “everything, so to speak, collapsed around me.”

In Europe, the summer of 1783 had been unusually warm, the warmest recorded in England before 1995. White called the season “an amazing and portentous one, full of horrible phenomena”, and complained of the abnormal number of wasps. The heat may have been a short-term greenhouse-gas effect from high concentrations of sulphur dioxide. Or it may have just been natural variation.

AP

What is more certain is that, high in the atmosphere, the volcanic gases reflected away some of the sun's radiation even after the cloud had dissipated at lower levels. This back-scattering was to have a bigger impact on the climate than the summer cloud itself. The winters that followed the Laki eruption were freakishly cold.

At the time, some people suspected the volcano might be to blame. Benjamin Franklin, then America's ambassador to Paris, wrote to the Literary and Philosophical Society of Manchester that “[the sun's] effect of heating the Earth was exceedingly diminished. Hence the surface was early frozen. Hence the first snows remained on it unmelted. Hence the air was more chilled. Hence perhaps the winter of 1783-84 was more severe than any that had happened for many years.” In speculating upon the cause, he wondered “whether it was the vast quantity of smoke, long continuing to issue during the summer from Hecla in Iceland [near Laki]”. It was.

On average, temperatures in Europe during 1784 were about 2°C below the norm of the second half of the 18th century; and the closer to Iceland, the bigger the impact. Iceland itself was almost 5°C colder than normal and saw the longest period of sea ice around the island ever recorded. Berlin and Geneva, about 1,300 miles away, were 2ºC below normal, whereas the anomaly in Vienna, 1,700 miles from Laki, was only 1.5°C. Stockholm and Copenhagen, the nearest cities at just over 1,000 miles distant, saw temperatures drop by over 3°C.

Beyond Europe Laki's biggest influence seems to have operated over the greatest distances. The light-scattering effects of volcanic gases in the upper atmosphere reduced the amount of solar energy reaching the Earth and disrupted the normal relationship between temperatures both at the upper and lower levels of the atmosphere, and between the poles and the equator. These are the engines of the weather. Disruptions to them weakened the westerly jet streams, altered the monsoons and affected the weather throughout the northern hemisphere.

The eastern United States suffered one of its longest and coldest winters, with temperatures almost 5°C below average. George Washington, who had just disbanded his victorious army and retired to Mount Vernon, complained that he was “locked up” there by snow and ice between Christmas Eve and early

March, while James Madison wrote from his home in Virginia that “we have had a severer season and particularly a greater quantity of snow than is remembered to have distinguished any preceding winter.” The St Lawrence river froze for a dozen miles far inland. In Charleston, South Carolina, which nowadays grinds to a halt with a light dusting of snow, the harbour froze hard enough to skate on. Most extraordinary of all, ice floes floated down the Mississippi, past New Orleans and out into the Gulf of Mexico.

The eastern United States recovered fairly quickly, but places farther afield were not so lucky. Japan suffered one of the three worst famines in its history in 1783-86, when exceptional cold destroyed the rice harvest and as many as 1m people died. Special crews had to be hired to clear the roads of the dead. In Japan this famine is usually attributed to another volcanic eruption, that of Mount Asama, but its impact was small compared with Laki's.

Tree-ring evidence from the Urals, the Yamal peninsula in Siberia and Alaska all suggests northern areas had their coldest summer for 400 to 500 years. The oral history of the Kauwerak tribe of north-western Alaska calls 1783 “the year summer did not come”; the tribe was almost wiped out.

Because of disruption to the monsoons, rainfall in the Nile watershed was down by almost a fifth and in the Niger watershed by more than a tenth. In his “Travels through Syria and Egypt”, Count Constantine Volney, a French orientalist, wrote that “the [Nile] inundation of 1783 was not sufficient, great part of the lands therefore could not be sown for want of being watered. In 1784, the Nile again did not rise to favourable height, and the dearth immediately became excessive. Soon after the end of November, the famine carried off, at Cairo, nearly as many as the plague.” By January 1785, he says, a sixth of Egypt's population had either perished or fled.

In Europe, the Laki eruption was not to leave an indelible mark. Within a few years, weather patterns returned to normal and Europeans had forgotten the extraordinary “dry fog”. But in retrospect, the eruption can be seen to exemplify certain truths about climate change.

Polluting gases can change global temperatures a lot (in this case by cooling, not warming). Volcanic gases can do as much damage as any amount of human activity. But the poisonous cloud was only part of the story. Weather patterns mattered too. Stable anti-cyclones brought the gas to earth in Europe and stratospheric currents then spread it over a third of the globe. And the connections between pollution and weather are complex and unpredictable: people at the time understood the link between the volcano and the haze, but not the connection with events the other side of the globe. Societies are hit very differently: the impact was modest in most of Europe, but devastating in Egypt, Japan and Alaska. Lastly, people react to environmental disruption in ways that are themselves disruptive.

As the Icelanders struggled to return to normal in the summer of 1785, the country's superintendent ordered the paupers of neighbouring districts to be moved to Steingrimsson's area, though there was no food. In desperation, he says, “we held counsel and decided to head east to the beaches. A single man who was there ahead of us, a farmer from Stapafell called Eirikur, had on that day clubbed 70 adult seals and 120 pups on the beaches. I held a service in Kalfafell in the finest weather we experienced during that time where all of us gladly thanked God for His mercy in so richly providing for us in this barren land and so agreeably removing all the famine and death which otherwise awaited.”

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The European car industry

Collision course

Dec 19th 2007 | MUNICH AND STUTTGART
From The Economist print edition

New European Union emission rules are bad news for Germany's carmakers

Illustration by David Simonds

IF BALI failed to produce much besides cop-outs and compromises, at least the European Commission showed this week that it means business when it comes to tackling carbon emissions. Transport-related CO_2 emissions in the European Union grew by one-third between 1990 and 2005 and now constitute 27% of the EU total. Of these, the commission reckons, cars and vans are responsible for about half.

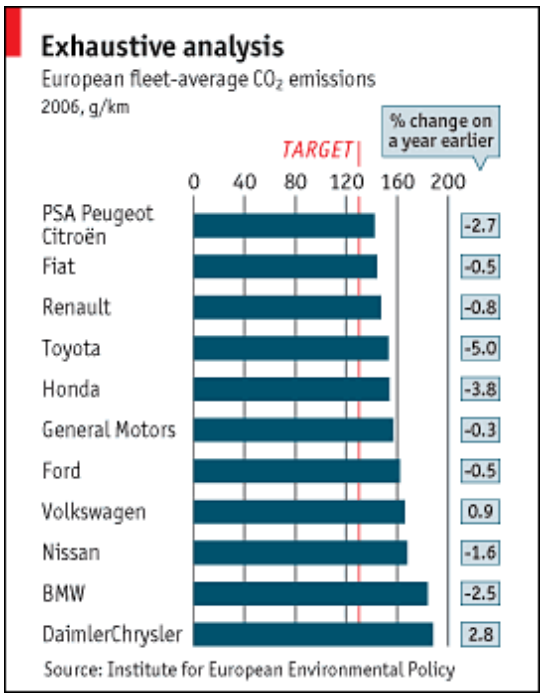
On December 19th, as *The Economist* went to press, the commission was due to publish its final proposals for cleaning up Europe's cars. Although it will be at least a year before they become law and there is still scope for some of the details to change—both the European Parliament and the Council of Ministers will want their say—there is now little doubt that in only a few years' time European carmakers will have to meet the world's strictest CO_2-emission standards.

At present Europe's cars emit an average of about 160 grams of CO_2 per kilometre (g/km). There has been some reduction since carmakers were last threatened with legislation a decade ago, but progress has been painfully slow—about 1.5% a year rather than the 3% needed to meet the voluntary target of 140g/km by 2008 that the industry agreed to a few years ago. The commission is therefore insisting that by 2012, the fleet-average emissions from new cars sold in the EU must not exceed 130g/km, with another 10g/km reduction coming from other sources, such as low rolling-resistance tyres, more efficient air-conditioning and greater use of biofuels.

The proposals have split Europe's car industry down the middle. The French and the Italians, represented by PSA Peugeot Citroën, Renault and Fiat, have so far been fairly sanguine. In 2006 their fleets, heavily biased towards fuel-efficient small cars, averaged 142-147g/km. It will not be easy for them to meet the new rules without increasing the cost of their cheap, low-margin cars, but they are close enough to be confident that they can get there.

For the Germans it is a different matter. Volkswagen makes plenty of small cars, including the BlueMotion Polo, with emissions of 99g/km—even less than the 104g/km of a Toyota Prius hybrid. Its fleet-average emissions have actually been rising slightly, however, because of the recent success of its Audi brand. But it is the two premium marques that Audi competes against, Mercedes-Benz and BMW, that feel most threatened by

the commission's plans. Mercedes makes the compact A-class, its parent Daimler makes the tiny Smart, and BMW has the Mini, but their brands are synonymous with big, powerful cars that promise luxury and high performance. Mercedes props up the 2006 emissions league table with a fleet average of 188g/km, and BMW is next from bottom with 184g/km (see chart).



BMW has at least been making an effort to burnish its environmental credentials. As well as reducing the weight of its cars, it is now extending across its range a package of fuel-saving tricks called “Efficient Dynamics”. This brings together the latest engine technologies with energy-saving auxiliary units, such as alternators and coolant pumps, automatic start-stop (to shut the engine down in stationary traffic) and regenerative braking. As a sign of what can be achieved, the 2-litre diesel in its new 3-series cars produces a healthy 177 brake horsepower (bhp) with emissions of just 128g/km. In 2006 BMW was one of the fastest-improving European carmakers, and Efficient Dynamics may push it to the top of the league in 2008.

By contrast, Mercedes still seems to be in a state of denial. It has heavily promoted its BlueTec technology, but that is primarily designed to deal with clean-air regulations in America (which have limited the sales of diesel cars), not to meet European CO_2 rules. Along with BMW, General Motors and Chrysler, it has developed a new hybrid system called Two-Mode. But this is an expensive option that is likely to find its way only slowly into the firm's sport-utility vehicles (SUVs) and bigger saloons.

Meanwhile, both BMW and Mercedes continue to build cars that are bigger than the ones they replace and have ever more powerful engines. BMW is about to launch the X6, a rival to Porsche's grotesque Cayenne SUV, which will be available with a 408bhp twin-turbo V8. For its part, Mercedes seems intent on offering high-performance versions of every vehicle it makes, even shoehorning a 6.3-litre engine into its mid-size C-class saloon.

Both firms insist that as long as customers want such cars, they will build them, particularly as they are highly profitable and popular in export markets such as America, Russia and China. They also point out, correctly, that removing their high-end models entirely from the European market would have only a minimal impact on carbon emissions, because they are a tiny proportion of the overall fleet. They argue that the makers of small cars, which sell so many more vehicles, should have to do more to reduce emissions—perhaps by reducing their fleet averages well below the EU's proposed 130g/km limit.

Intensive lobbying by BMW and Mercedes, with support from the EU's industry commissioner, Günter Verheugen (who happens to be German), and the German chancellor, Angela Merkel, has had some effect. To the fury of green campaigners, the commission has agreed to a “weight dispensation” that will allow makers of heavier cars (ie, the Germans) to produce higher fleet-average emissions.

The commission is determined not to let the premium carmakers off the hook, however, so much will depend on the slope of the weight/CO_2 graph. The most grossly polluting vehicles may not be numerous, but if they do not attract stiff penalties the emission rules will lose all credibility. The commission would like to impose fines of €95 ($137) per car per gram on emissions exceeding 130g/km. Without any weight allowance, the existing Mercedes fleet would attract a penalty of about €5,500 a vehicle. In practice the final figure will be lower. But the commission is adamant that although it does not want to destroy the German carmakers' business, they must be under real financial pressure to develop and implement radical fuel-saving technologies.

Even though it is clear what new technologies will be needed (smaller engines, more efficient automatic transmissions, various kinds of hybrid and greater use of biofuels) the Germans will struggle. Given that a new car takes five to seven years to develop, new technologies cannot be incorporated straight away, they argue. A further problem, according to Ricardo, an automotive consultancy, is that there are not enough engineering resources to go round. As things stand, the Germans have no hope of avoiding substantial fines unless they are given longer to comply and are prepared to change their mix of models. Neither looks likely.

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Cement

Concrete proposals needed

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The construction industry confronts its carbon footprint

FANS of cement like to point out that it is the most widely used substance on the planet after water. Unfortunately it is also one of the most polluting. The main ingredient in concrete, cement is made by heating limestone and clay until they fuse into a material called clinker, which is then ground up and mixed with various additives. Both the heating, which is normally fuelled by coal, and the chemical reaction it induces release large amounts of carbon dioxide, and so contribute to global warming. By the industry's own admission, cement-making accounts for some 5% of the world's emissions of greenhouse gases—twice the amount attributed to aviation.

The European Union already restricts emissions from cement kilns, and other jurisdictions are likely to follow suit. The biggest cement firms have joined an outfit called the Cement Sustainability Initiative, which promises to realise voluntary emissions cuts—doubtless in the hope of heading off further regulation. But with demand for cement growing by around 5% annually, the industry's environmental headaches are only likely to grow.

Lafarge, Holcim and Cemex, the three biggest firms in the business, have all pledged to cut the emissions from each tonne of cement they make: the first two by a fifth by 2010 and Cemex by a quarter by 2015. So far, they are all more or less on track. In 2006, for example, Holcim's emissions per tonne were 16% below the level of 1990.

The cuts come in three main areas. First, cement-makers are trying to make their kilns more efficient and so reduce the amount of energy needed per unit of output. Second, they are replacing fossil fuels such as coal and coke with alternatives such as farm waste or used tyres. Third, they are mixing more additives into their cement, and so reducing the proportion of emissions-intensive clinker.

But all three tactics have their limits. Cement-makers have been improving the efficiency of their kilns for over a century, leaving relatively little scope for further big gains. Fuel substitution is also difficult: environmental activists worry that burning waste might release noxious chemicals. Indeed, Greenpeace's campaigns against cement plants have focused more on the dangers of waste incineration than on their role in climate change. And building codes limit the extent to which cement can be diluted with additives.

Moreover, these measures yield only marginal benefits. Demand for cement is growing faster than emissions per tonne are falling, leading to an overall increase in emissions. Holcim's total emissions, for example, have risen by two-thirds since 1990. Lafarge has pledged to cut its overall emissions in rich countries, where demand is growing relatively sluggishly. But at the same time it hopes to expand rapidly in emerging markets. In mid-December it agreed to buy the cement division of Orascom, an Egyptian conglomerate, for €8.8 billion ($12.9 billion).

Cement firms see no way to alter the basic chemistry of cement-making. In time, they say, they may be able to capture the carbon dioxide they produce and store it underground, just as some utilities propose to do with some power stations. They also point out that the stronger and more flexible varieties of cement and concrete they have developed can be used more sparingly. Bruno Lafont, the boss of Lafarge, proudly indicates a photograph of an impossibly thin pedestrian bridge built with one such miracle product. Instead of blaming the cement industry, he says, anxious environmentalists should take on the construction industry as a whole. Buildings could be more energy-efficient with such materials, and smarter architecture and city planning could reduce the demand for cement and concrete.

David Santillo of Greenpeace supports such initiatives, but argues that the industry will ultimately need to come up with a substitute for cement. There are various alternatives, including binding agents derived from oil and silicon—but none has achieved much commercial success. Mr Lafont, meanwhile, says he spends a week in the laboratory every year, urging Lafarge's boffins on.

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Takeovers in Japan

Hostility, of sorts

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A takeover in Japan underscores how the country is slowly changing

IN OTHER countries it would barely qualify as news. But the deal that took place in Japan on December 13th has caused a stir: the first successful hostile takeover, many are saying, of a company listed on the Tokyo Stock Exchange. The transaction itself is mundane, and whether it was really hostile, or really the first such example, is debatable. But it highlights the ways in which Japan's style of capitalism is changing—and how far, to Western eyes, it still has to go.

The deal involved the takeover of Solid Group, a network of secondhand-car dealers listed on the less glamorous second tier of the exchange, by Ken Enterprise, an investment firm. It bought 114.4m shares, or 48.48% of Solid Group, from Lehman Brothers, an investment bank, for $27m. The bank had taken the shares as collateral when it provided a loan earlier this year to Solid Group's parent company, Solid Acoustics, which defaulted in July.

Arguably the deal was not really hostile. Solid Group opposed the sale, but ownership had in effect already passed to Lehman, an outside entity. And a single seller was involved: there was no battle between the bidder and the management to win over shareholders, as generally happens with a hostile bid. (Solid Group says it is suing Lehman for $27m in damages for making a loan to its parent that, it claims, Lehman knew would not be repaid.)

Even if the takeover was technically a hostile one, it was not the first. In 2004 a handful of investors in Miyairi Valve Manufacturing, also listed on the exchange's second tier, won control and ousted the president and two directors. But the firm was small and the circumstances were so unusual that no precedent was set, says Marc Goldstein of Institutional Shareholder Services, an advisory firm.

The latest deal has caused disquiet, however, since the names involved conjure up memories of a previous hostile-takeover attempt in the minds of Japanese businessmen. Solid Group was formerly part of Livedoor, an aggressive internet conglomerate that attempted an elaborate hostile takeover of Fuji Television in 2005—outraging the business and political establishments. Livedoor's bid was bankrolled by Lehman Brothers.

Why is there such hostility towards hostile bids? In Japan companies are regarded not as money-making machines but as self-perpetuating institutions that are expected to pursue “service to society” first and profits second. Many firms date back centuries, and changes of ownership are rare. Atsushi Saito, the president of the Tokyo Stock Exchange, says it is hard for the Japanese to accept that a firm can be traded like a commodity; the interests of employees, suppliers, customers and the community are paramount. “It is difficult to assert the idea that companies are owned by their shareholders,” he says.

Yet as Japanese companies adopt elements of American-style capitalism to compete internationally, this ethos is waning. Many firms now keep employees at arm's length by taking them on as part-timers, rather than full members of the corporate family. Japanese investors, encouraged by foreigners in many cases, have started to call for greater returns to shareholders. And the volume of mergers and acquisitions (M&A) in Japan has quadrupled in the past decade.

But the value of M&A deals is still only 3% of Japan's GDP, compared with 10% in America and Europe. Indeed, by most bankers' reckoning Japan is 20 years behind America and Europe when it comes to M&A activity. According to Nicholas Benes, an external director at the reconstituted holding company for the Livedoor group, that this latest deal is regarded as Japan's first hostile takeover “shows how much we are still in the early years”.

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Prosecco

Fizzy or still?

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Italy's cheaper alternative to champagne is growing in popularity

ITALY'S manufacturing clusters are well known: machine tools north of Milan, jewellery in Valenza Po, tiles in Sassuolo and many more. Less famous is the country's sparkling-wine cluster, the official “prosecco district” established in 2003 around the towns of Conegliano and Valdobbiadene, just north of Venice. Regional legislation recognising the cluster has brought public money to promote prosecco, a wine made mainly from the grape of the same name.

Not that prosecco needs much help, judging by what has happened in recent years. Sales of the best prosecco, labelled Denominazione di Origine Controllata (DOC), have doubled in the past 15 years, to reach about 50m bottles in 2007.

Growing sales of sparkling wine have bucked the trend in Europe, where wine consumption has fallen over recent decades, particularly in Italy. Global sales of champagne, at around 300m bottles a year, are also increasing. But according to Giancarlo Vettorello, general manager of the consortium that makes sure that the cluster's winemakers follow the rules, the two wines do not really compete in the Italian market. The difference lies in how they are made: prosecco's bubbles come from a second fermentation under pressure in steel vats, which is less costly than the labour-intensive method used for champagne. “Champagne is for special occasions, but no special reason is needed to open a bottle of prosecco,” says Mr Vettorello.

But the two wines do compete in export markets, where the muscle of the consortium and the DOC cluster has helped the many small firms—the cluster has 2,800 vineyard owners and 460 wineries—that lack the resources to promote their product abroad. About one-third of prosecco DOC production is exported, mainly to Germany where it has long been popular. But that market is mature, so the winemakers are now expanding into other countries. Sales in Britain have increased five-fold since 2000, to reach 1.1m bottles in 2006; sales in America have increased from 555,000 to 1.4m bottles over the same period—far faster than champagne's sales growth.

Are champagne-makers worried? A telling sign would be if they started to buy prosecco-making wineries. So far the only traffic is in the other direction: Vinicola Serena, the winery owned by the family of Giorgio Serena, the chairman of the winemakers' association in the prosecco region, bought a medium-sized champagne firm near Rheims two years ago—the first Italian business to venture there. Could prosecco's bubble be about to burst?

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Economist.com BUSINESS

Face value

The accidental innovator

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Evan Williams, the founder of Blogger and Twitter, epitomises Silicon Valley's right brain

Sara Morishige

AT SOME point in the decade after he moved from the farm in Nebraska where he grew up to the innovation hub that is the San Francisco Bay Area, Evan Williams accidentally stumbled upon three insights. First, that genuinely new ideas are, well, accidentally stumbled upon rather than sought out; second, that new ideas are by definition hard to explain to others, because words can express only what is already known; and third, that good ideas seem obvious in retrospect. So, having already had two accidental successes—one called Blogger, the other Twitter—Mr Williams is now trying to make accidents a regular occurrence for his company, called Obvious.

Of his previous successes, Blogger is today the best-known. It came about in the late 1990s when Mr Williams and his team struggled to build a complex software tool to let people collaborate. To keep each other abreast of the project, they kept a simple internal diary. Since that seemed to be the only thing working well, they joked that it, not the original project, should become their product. Thus was born Blogger, a web service that lets anybody create a blog with a few clicks. At the time, almost nobody understood what a blog was, or why anybody would want one. But in 2003 Google bought the company, and both blogs and Blogger are today part of the internet's mainstream.

By transferring to Google, however, Mr Williams, with his intuitive right-brain approach, was moving to Silicon Valley's analytical left brain. Shy and taciturn, he discreetly lets on that he hated every minute of his time at what was already an internet superpower in the making. Google trumpets its innovative nature, but its genius is for attacking known problems (web search, e-mail, calendars, etc) with brute force—weapons of mass computing and mathematical algorithms. Mr Williams's passion is solving new problems. In theory he could have done this at Google with his “20% time” on the side, but in practice he found it tedious to pitch ideas to the Google bureaucracy. Left and right brains clashed in other ways. Google values official brains—the credentialled, academic sort—whereas Mr Williams dropped out of university in Nebraska because he found the concept somewhat silly. He left Google after less than a year.

His next idea, he now realises, was flawed by being obvious not in retrospect, but from the start—itself an important lesson. When podcasts emerged as the audio analogue of blogs, Mr Williams used his Google money to invest in a firm called Odeo that aimed to make listening to podcasts easier. Yet such a tool was so vital that Apple did the job with iTunes, its popular music-library software, thus eliminating the need for Odeo.

So Mr Williams started Obvious, determined to go back to good accidental stumbling. One of its side projects—Mr Williams loves side projects so much that his main projects seem to exist mainly as placeholders—was something called Twitter. If blogs were difficult to explain in 1999, Twitters are well nigh impossible. You might call them micro-blogs or nano-blogs, as Twitter lets users write only 140

characters at a time, albeit from any device, or using an instant message or text message. Twitter imposes another restraint: each post must be an answer to the same question: What are you doing?

Thinking with the left brain, most reasonable people seem to agree that this idea is hare-brained, frivolous, banal and ridiculous. Indeed it is. And millions of people absolutely love it, twittering away throughout the day. Like all new and cool things, says Mr Williams, it's “experiential”. So it turns out that mums love to be notified on their mobile phones that their teenager is “eating an orange”. Colleagues appreciate that you are “running late” as they wait in the meeting room. Friends seeing that you are “having an espresso at Starbucks” might stop by. And a lot of people simply feel more connected by scavenging for conversational scraps from their friends.

All of this has made Twitter the third “next big thing” in Silicon Valley in 2007—after the iPhone, Apple's innovative new mobile handset, and Facebook, a social-networking site. The proof is that copycats have sprung up, that Google has bought one of them and that Facebook has made its “status” updates, in effect, internal Twitters. (Facebook also works with Twitter itself.) Exactly how to make money from Twitter remains an open question—one that Mr Williams is intellectually curious about, though it has not exactly been his main concern in the past. He would like to make Twitter as mainstream as Blogger. But what he really wants is to make stumbling on accidents into a culture, habit, process or speciality. That is why he has spun the 12 people working on Twitter out of Obvious (though they all sit in the same snazzy San Francisco loft), and is looking for new talent.

The pursuit of accidents

The irony of trying to plan accidents, and orchestrate their frequent occurrence, is not lost on Mr Williams. So he tries mental tricks. One is to ask “what can we take away to create something new?” A decade ago, you could have started with Yahoo! and taken away all the clutter around the search box to get Google. When he took Blogger and took away everything except one 140-character line, he had Twitter. Radical constraints, he believes, can lead to breakthroughs in simplicity and entirely new things.

For the same reason, Mr Williams loves frustration. Blogger revealed itself when he was frustrated with something bigger: collaboration software. He chooses still to be frustrated by it, saying that he would like to create some sort of “better to-do list”, a cross between a calendar, a wiki and other things. Ultimately, that is not the point, of course. The point is to try to do one thing, in the hope of losing discipline and focus at the first opportunity. “We have an itch that we scratch,” he says, “and that becomes the thing.” Silicon Valley is what it is because it has a few firms like Google—and lots of people like Evan Williams.

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Mortgage-industry lawsuits

The finger of suspicion

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Corbis

In America and elsewhere trial lawyers, state prosecutors and regulators look for the crime in subprime

FINANCIAL firms have already been drenched by mortgage-related losses. Now a wave of litigation threatens to assail them. According to RiskMetrics, a consulting firm, between August and October federal securities class-action lawsuits were filed in America at an annualised pace of around 270—more than double last year's total and well above the historical average. At this rate, claims could easily exceed those of the dotcom bust and options-backdating scandal combined.

At most risk are banks that peddled mortgages or mortgage-backed securities. Investors have handed several writs to Citigroup and Merrill Lynch. Bear Stearns has received dozens over the collapse of two leveraged hedge funds. A typical complaint accuses it of failing to make adequate reserves or to explain the risks of its subprime investments, and of dubious related-party transactions with the funds. Several firms, including E*Trade, a discount broker with a banking arm sitting on a radioactive pile of mortgage debt, are being sued for allegedly failing to disclose problems as they became apparent to managers.

But one thing that sets the subprime litigation wave apart from that of the 2001-03 bear market is its breadth. After the collapses of Enron and WorldCom, lawsuits were targeted at a fairly narrow range of parties: bust internet firms, their accountants and some banks. This time, investors are aiming not only at mortgage lenders, brokers and investment banks but also insurers (American International Group), bond funds (State Street, Morgan Keegan), rating agencies (Moody's and Standard & Poor's) and homebuilders (Beazer Homes, Toll Brothers *et al*).

Borrowers, too, are suing both their lenders and the Wall Street firms that wrapped up their loans. Several groups of employees and pension-fund participants have filed so-called ERISA/401(k) suits against their own firms. Local councils in Australia are threatening to sue a subsidiary of Lehman Brothers over the sale of collateralised-debt obligations (CDOs), the *Financial Times* has reported. Lenders are even turning on each other; Deutsche Bank has filed large numbers of lawsuits against mortgage firms, claiming they owe money for failing to buy back loans that soured within months of being made.

“It seems that everyone is suing everyone,” says Adam Savett of RiskMetrics' securities-litigation group. “It surely can't be long before we get the legal equivalent of man bites dog, where a lender sues its borrowers for some breach of contract.”

The authorities, too, are baring their teeth. Several Wall Street banks have received subpoenas from New

York's attorney-general, Andrew Cuomo, requesting information on their packaging of now-stricken securities. This comes on top of a deepening probe into possibly inflated home-price appraisals by brokers and lenders, including Washington Mutual and First American Corporation. Ohio's attorney-general, Marc Dann, has been just as hyperactive, suing over a dozen lenders and brokers.

No less important is the spadework being done by the Securities and Exchange Commission, America's main markets watchdog. It is conducting more than 20 investigations, including one into the arrangements banks entered into with hedge funds that may have been designed to hide or delay mark-to-market losses.

Such probes are even more important than they appear because they could encourage private litigation. Regulators and state prosecutors have more powers to demand information than private plaintiffs do. What they unearth, if they go public with it, can bolster investors' claims or even lead to new ones. This is what happened following congressional investigations into the tobacco industry, and when Eliot Spitzer, Mr Cuomo's predecessor (and now New York's governor), went looking for smoking guns at banks, insurers and mutual-fund managers after the 2001 stockmarket fall. The officials are likely to dig even harder this time since the issue touches poor homeowners, a more vulnerable group than day-traders.

In readiness, law firms have been rushing to set up dedicated subprime practices. These are working not only on disputes but also on helping clients to unwind leveraged transactions. “Securitisation is the particle physics of finance, which makes it much richer legally than technology stocks,” says John Rosenthal, head of Nixon Peabody's subprime team.

That complexity is a mixed blessing for plaintiffs. Showing that financial innovation got out of hand will not be hard. However, they have to prove not only incompetence, but fraud. Defendants will argue that, far from deceiving investors, they failed to understand the structured products they had bought (or created) and the speed with which those securities could deteriorate in value—in other words, that they were clueless but not conniving.

Banks that face lawsuits over mortgage debt they peddled have at least one strong argument in their favour: they themselves bought the stuff. Both Citi and Merrill, for instance, held on to the senior tranches of CDOs, which have since gone bad. Would they have done this knowing that the securities were potentially so toxic? On the other hand, plaintiffs' lawyers say there are plenty of examples from recent months of banks and companies that have run aground even after stating in calls with investors that they had safeguards in place.

As busy as the lawyers are, they are only warming up. Scrutiny of the way banks account for tainted securities is just beginning, as is the task of poring through e-mails provided under subpoena. And as pain spreads to other securitised products, such as car and credit-card loans, they too will come under the spotlight.

The ultimate cost of the mortgage crisis in terms of settlements, awards and legal fees can only be guessed at. But the consensus view is that payouts will climb well above the billions stemming from the internet bubble.

Now, as then, many will settle for large sums rather than risk lengthy court proceedings that could end in even bigger payouts, even if their defences have some merit. And it is not just those directly involved who will suffer. On one estimate, from Guy Carpenter, a reinsurance broker, insurers that underwrite directors and executives could end up shelling out more than $3 billion. For the plaintiffs' bar, at least, the next boom is already at hand.

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Buttonwood

Swan songs

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The crises to watch for in 2008

LEAF through the financial magazines at this time of year and they are full of predictions. The five stocks to own! The hottest mutual funds! Wall Street's finest are asked to spell out their forecasts in full. The venerable Abby Joseph Cohen of Goldman Sachs asserts, with remarkable precision, that profits will grow by 5.6% and that the S&P 500 index will end the year, not at 1,670 or 1,680, but at 1,675.

The one forecast Buttonwood can safely make for 2008 is that the consensus will prove to be wrong. Although many anticipated a fall in American house prices for 2007, for example, few expected the scale of the ramifications for financial markets, as a whole system of structured finance appeared to unravel and the banking system was plunged into crisis.

In one of the defining phrases of 2007, the author and investor Nassim Taleb has called these occurrences “black swans”—unexpected events that have enormous consequences. These are, by definition, very hard to forecast. One approach is to make several wild guesses in the hope that one will prove right; Saxo Bank, for example, predicts, along with a further doubling of grain prices, that Ron Paul, the Texan Republican, will be elected president. Buttonwood will take the more modest approach of highlighting a couple of areas that could burst out of the background to grab next year's headlines.

The first is commercial property. The very pressures that threaten further falls in the housing market (a slower economy and tighter credit) tend to affect business occupiers. And past banking crises have stemmed more often from the commercial market (which has traditionally shown more violent swings) than from the residential one.

The British commercial-property market has already shown signs of cracking, as recently became clear when a fund run by New Star Asset Management marked its assets down by 18%. The Bank of England's *Financial Stability Report*, published in November, revealed that lending to commercial-property companies now comprises 9% of all domestic lending, a higher proportion than at the previous peak in 1989-90 (which was followed by a property crash).

Other warning signs are plain to see. In 2006 British commercial property reached the moment defined by Hyman Minsky, an American economist, when investment becomes driven by speculators. That year the rental yield on property fell below the cost of financing, implying that investors were counting on prices to keep rising to make money.

Britain is far from alone. In Spain and Ireland boom also seems to be turning into bust. And then there is America. The fundamentals still look favourable; office vacancy rates, for example, still seem to be low. But the credit crisis may have an effect, nonetheless. On December 17th Centro Properties, the Australian owner of 700 American shopping malls, defaulted on some $1.1 billion-worth of loans.

A second area of danger is eastern Europe. Former iron-curtain countries have been popular investment destinations for many years on the grounds that their economies and financial markets are bound to converge with those of western Europe. But as Ian Harnett of Absolute Strategy Research points out, this has led to a dangerous trend within the ex-communist countries: the desire of consumers and companies to borrow at low interest rates in foreign currencies.

The temptation is understandable. Hungarians borrowing in Swiss francs win nine percentage points of interest savings a year. The risk, of course, is that the forint devalues or depreciates. If that happens, the burden of repaying the foreign debt then becomes crippling. That was the lesson of the Asian crisis of 1997-98.

Some economies are more exposed than others. According to Gillian Edgeworth, an economist at Deutsche Bank, 51% of Hungarian credit is in foreign currencies. But the trigger for a crisis could come

from anywhere: Bulgaria, where foreign-currency debt of 48% of GDP is laced with a current-account deficit approaching 18% of GDP; Latvia, where the current-account deficit is nearly 25% of GDP; or Kazakhstan, where Fitch, a rating agency, just changed its outlook to negative from stable. And if confidence goes from one of those markets, it could spread to the whole region.

Would a crisis in the former Soviet block really matter? It would if it struck just as America's economy was slowing sharply and as weakness was afflicting both western Europe and Japan. As the subprime crisis showed this year, it is hard to tell which banks and investors are at risk until the bad news comes out. Swans can give you a nasty peck.

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Health care in Africa

Of markets and medicines

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Big donors are betting on Africa's private sector to improve health

IS THIS privatisation through the back door? That is a question sure to come up about the $1 billion health-care strategy for Africa unveiled on December 17th by the International Finance Corporation (IFC), the private-sector arm of the World Bank.

The IFC plans to set up an equity investment fund, ultimately worth up to $500m, including money from other donors, to invest in small and medium-sized enterprises in the health-care industry. It also wants to create a $400m-500m debt vehicle that will fund local banks that lend to such entrepreneurs.

This could be controversial stuff. Lars Thunell, the IFC's chief executive, anticipates the objections: “I am from Scandinavia where the government provides health care, so I initially asked myself, 'Who am I to promote the private sector in Africa?'” The reason he forged ahead, he explains, is that it became pretty plain that Africa's governments “simply do not have the resources and capacity to do everything.”

Big donors are finding that African ministries are overwhelmed by aid money. Tachi Yamada of the Bill & Melinda Gates Foundation, which supports the IFC's new approach even as it continues to fund Africa's public sector, observes: “The paradox is that the poorest of the poor often get health care through the private sector.”

About half of the region's $16.7 billion spending on health care already comes via private enterprise and charities. McKinsey, a management consultancy, argues in a new report for the IFC that this share will grow larger—to 60%, or an estimated $21.2 billion, by 2016. Optimists think this coming boom may even produce substantial profits. Merrill Lynch put out a recent report that ranked the attractions of Africa's health-care industry to foreign investors above even infrastructure and telecoms.

If the IFC's scheme stimulated private capital, that would be good. Sub-Saharan Africa, which has 11% of the world's people, suffers 24% of the burden of disease, measured by the years lost to sickness and early death. But it absorbs less than 1% of the planet's health-care spending.

To grease the skids for private capital, and to ensure it does not go only into fancy facilities that serve the urban rich, the IFC and McKinsey propose a bundle of technical fixes. These include regulatory reform to repair the weak standards and lack of enforcement that result in dangerous drugs being sold on the open market. They want to help countries set up partially subsidised but market-driven health-insurance schemes. Both Nigeria and Rwanda have fledgling programmes of this type that involve both government subsidy and market providers.

That, argues Julian Schweitzer, director of health at the World Bank, points to an important insight that should mollify the critics. “The public sector can pay, but anybody can deliver services,” he insists. As the financing of health care is separated from its delivery, the region's long-suffering poor may at last get the health services they deserve.

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Goldman Sachs

Modern Midas

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Bumper profits and a stellar reputation. Time to worry

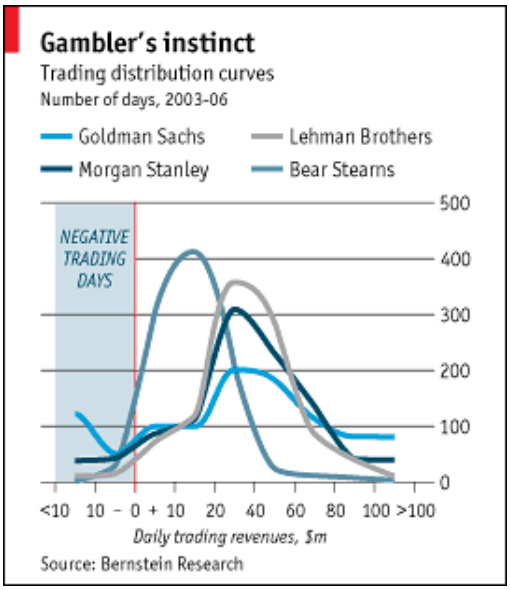
"IT IS important to be a bit institutionally paranoid, especially when things are going well." Thus Lloyd Blankfein, chief executive of Goldman Sachs at a conference in November. After the year Goldman has had, Mr Blankfein cannot be far off hearing imaginary voices.

On December 18th the investment bank unveiled full-year results that contrived to be both widely expected and astonishing. Earnings in the fourth quarter stood at $3.2 billion, a 2% rise on the same period in 2006. Even as most of its peers have been dragged down by subprime-related investments, Goldman's fixed-income business has boomed, thanks in part to a proprietary bet that the value of mortgage-backed securities would fall. The rest of its businesses are also steaming ahead. Its share price, as of December 18th, remained (just) up from the start of the year. Its status as Wall Street's employer of choice is gold-plated, not least because of a bonus-and-salary pool of $20 billion. "If Goldman Sachs comes calling, you have to consider it," says one headhunter.

Mr Blankfein's neurotic impulses are well founded, however. Being at the summit of the banking industry is all very well, but the only way left is down. There are reasons, besides the impact of a slowing economy, to think that Goldman's triumphant 2007 contains the seeds of a less comfortable 2008.

The first is that success on this scale always reaps a harvest of envy (never mind that Mr Blankfein's handsome bonus will be dwarfed by the pay-off given to Stan O'Neal for leaving Merrill Lynch in incomparably worse shape). Rich, well-connected bankers have a limited call on sympathy at the best of times. Goldman's gamble that many of America's overstretched borrowers would default on their mortgages is unlikely to win it new friends. Signs of a backlash are visible: Christopher Dodd, a Democratic senator, has raised questions about the part played by Hank Paulson, who ran Goldman before becoming treasury secretary, in fuelling the subprime mess.

The second cause for concern surrounds Goldman's finely balanced (or horribly compromised: take your pick) business model. As well as acting as an adviser and financier to clients, Goldman makes lots of money from putting its own capital to work. Proprietary trading and investments accounted for two-thirds of the firm's revenues in 2007. The tensions inherent in this approach are neither new nor unique to Goldman, but they have become much more obvious now that its traders have made hay taking short positions against debt instruments of a type peddled to clients by other parts of the bank. Accusations that Goldman has been issuing deliberately bearish research in order to drive markets down and make even more money are fanciful. But some of its clients may become more questioning.



The third trapdoor concerns Goldman's risk appetite. You may think that serenely stable share price suggests Goldman is a safe haven; its low price-earnings ratio tells a different story. Between 2003 and 2006 Goldman's traders were losing money on many more days than other Wall Street firms (see chart). The bank's risk-sensitive culture is rightly lauded; its agility in times of trouble has been proven. But it is neither cautious nor transparent, qualities that investors are likely to prize in coming months. Mr Blankfein's antennae are right to twitch.

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Economics focus

The new (improved) Gilded Age

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Illustration by Jac

The very rich are not that different from you and me; or less different, perhaps, than they used to be

IN 1904 Willie Vanderbilt hit a thrilling 92.3 mph (147.7 kph) in his new German motorcar, smashing the land-speed record. His older brother's sprawling North Carolina manse, Biltmore, could accommodate up to 500 pounds of meat in its electrical refrigerators. In miserable contrast, the below-average Gilded Age American had to make do with a pair of shoes and a melting block of ice. If he could somehow save enough for an icebox, a day's wage would not have bought a pound of meat to put in it. Paul Krugman, of Princeton University, has recently argued* that contemporary America's widening income gap is ushering in a new age of invidious inequalities. But a peek at the numbers behind the numbers suggests that Mr Krugman has been misled: far from a new Gilded Age, America is experiencing a period of unprecedented material equality.

This is not to deny that income inequality is rising: it is. But measures of income inequality are misleading because an individual's income is, at best, a rough proxy for his or her real economic wellbeing. Because we can save, draw down savings, or run up debt, our income may tell us little about how we're faring. Consumption surveys, which track what people actually spend, sketch a more lifelike portrait of the material quality of life. According to one 2006 study**, by Dirk Krueger of the University of Pennsylvania and Fabrizio Perri of New York University, consumption inequality has barely budged for several decades, despite a sharp upswing in income inequality.

But consumption numbers, too, conceal as much as they illuminate. They can record only that we have spent, but not the value—the pleasure or health—gained in the spending. A stable trend in nominal consumption inequality can mask a narrowing of real or “utility-adjusted” consumption inequality. Indeed, according to happiness researchers, inequality in self-reported “life satisfaction” has been shrinking in wealthy market democracies, America included, suggesting that the quality of lives across the income scale are becoming more similar, not less.

You can see this levelling at work in markets for transport and appliances. You no longer need be a Vanderbilt to own a refrigerator or a car. Refrigerators are now all but universal in America, even though refrigerator inequality continues to grow. The Sub-Zero PRO 48, which the manufacturer calls “a monument to food preservation”, costs about $11,000, compared with a paltry $350 for the IKEA Energisk B18 W. The lived difference, however, is rather smaller than that between having fresh meat and milk and having none. Similarly, more than 70% of Americans under the official poverty line own at least one car. And the distance between driving a used Hyundai Elantra and a new Jaguar XJ is well nigh undetectable compared with the difference between motoring and hiking through the muck. The vast spread of prices

often distracts from a narrowing range of experience.

Save money. Live better

This compression is not a thing of the past. To take one recent example, Jerry Hausman of the Massachusetts Institute of Technology and Ephraim Leibtag of the United States Department of Agriculture, show† that Wal-Mart's move into the grocery business has lowered food prices. Because the poorest spend the largest part of their budget on food, lower prices have benefited them most. The official statistics do not capture these gains.

As a rule, when the prices of food, clothing and basic modern conveniences drop relative to the price of luxury goods, real consumption inequality drops. But the point is not that in America the relatively poor suffer no painful indignities, which would be absurd. It is that, over time, the everyday experience of consumption among the less fortunate has become in many ways more similar to that of their wealthier compatriots. A widescreen plasma television is lovely, but you do not need one to laugh at “Shrek”.

This compression is the predictable consequence of innovations in production and distribution that have improved the quality of goods at the lower range of prices faster than at the top. New technologies and knock-off fashions now spread down the price scale too fast to distinguish the rich from the aspiring for long.

This increasing equality in real consumption mirrors a dramatic narrowing of other inequalities between rich and poor, such as the inequalities in height, life expectancy and leisure. William Robert Fogel, a Nobel prize-winning economic historian, argues†† that nominal measures of economic well-being often miss such huge changes in the conditions of life. “In every measure that we have bearing on the standard of living...the gains of the lower classes have been far greater than those experienced by the population as a whole,” Mr Fogel observes.

Some worrying inequalities, such as the access to a good education, may indeed be widening, arresting economic mobility for the least fortunate and exacerbating income-inequality trends. Yet even if you care about those aspects of income inequality, the idea can send misleading signals about the underlying trends in real consumption and the real quality of life. Contrary to Mr Krugman's implications, today's Gilded Age income gaps do not imply Gilded Age lifestyle gaps. On the contrary, those intrepid souls who make vast fortunes turning out ever higher-quality goods at ever lower prices widen the income gap while reducing the differences that matter most.

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*“The Conscience of a Liberal” by Paul Krugman. W.W. Norton, 2007.

**“Does Income Inequality Lead to Consumption Inequality? Evidence and Theory” by Dirk Krueger and Fabrizio Perri. *Review of Economic Studies*, 2006.

†“Consumer Benefits from Increased Competition in Shopping Outlets: Measuring the Effect of Wal-Mart” by Jerry Hausman and Ephraim Leibtag. *Journal of Applied Econometrics*, forthcoming.

††“The Escape from Hunger and Premature Death, 1700-2100” by Robert William Fogel. Cambridge University Press, 2004.

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Correction: The walking dead

Dec 19th 2007
From The Economist print edition

In our December 15th briefing on corporate restructuring, we should have said that the debt of European and American firms had risen as a multiple of EBITDA, not as a percentage of it. The data in Chart 2 should also have expressed debt as a multiple of EBITDA. Sorry.

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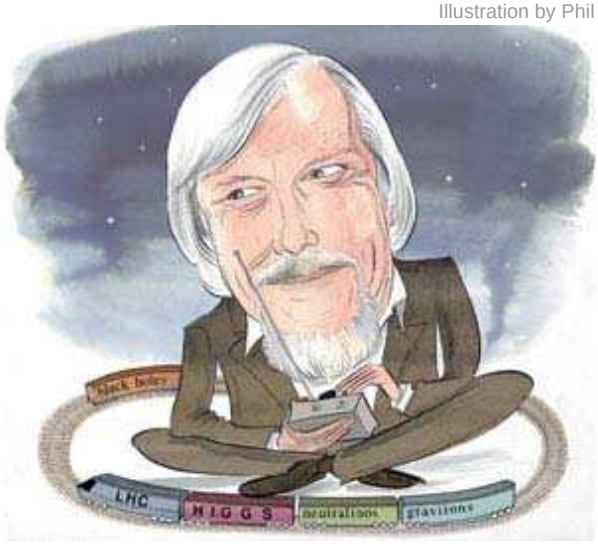
Particle physics

Merry Christmas, Dr Heuer

Dec 19th 2007 | GENEVA
From The Economist print edition

Illustration by Phil Disley



The most prestigious job in physics is about to change hands

NAPOLEON once asked of a newly appointed general, “Has he luck?” Rolf-Dieter Heuer clearly does—and in Napoleonic quantities. At the moment, he is the research director of the German Electron Synchrotron, an important but local institution based in Hamburg. On December 13th, however, he was chosen to be the next director-general of CERN, Europe's main particle-physics laboratory.

Luckier still, he does not actually start his term for 12 months. By then, if all has gone well, he will be in charge of the best Christmas present that a physicist could imagine—the world's biggest particle accelerator. Inside it, he and the thousands of other physicists who work at CERN hope to find the secrets of the universe: dark matter, dark energy, extra dimensions, tiny black holes that evaporate in an eye-blink and the origins of mass itself.

Dr Heuer's unlucky predecessor, Robert Aymar, has sweated out his own five-year term trying to get this behemoth of a machine, which is called the Large Hadron Collider (LHC), finished approximately on time and approximately on budget. Approximately, it looks as though he has succeeded. If all goes well, the LHC's first test run should happen in the summer, only two years late. Meanwhile, the creative financing techniques Dr Aymar employed to accomplish this—borrowing against future income in a way that the heads of pure-science projects rarely dare to do—seem to have worked, and not bankrupted the LHC as some more nervous people feared they might. Unfortunately for Dr Aymar, it is Dr Heuer who will reap the reward, for after a decade and a half in the wilderness since the United States abandoned its own plans for a giant accelerator, called the superconducting super-collider, the subject of particle physics is just about to get sexy again.

Standard deviations

The wilderness from which the field is emerging is called the Standard Model. This description of the way the universe works was built up in the early 1970s. It links together, in a reasonably satisfying mathematical way, all of the known fundamental particles (electrons, quarks, photons and so on) and three of the four known fundamental forces (electromagnetism, and the strong and weak forces that shape atomic nuclei). However, it is not a complete explanation. The force of gravity, for instance, is not yet part of it. Nor has its explanation of the existence of mass yet been proved true. And it relies on a lot of mathematical fiddle factors that are disturbingly arbitrary. Also, it has hardly changed for 35 years, and physicists are getting bored with it.

The LHC exists to relieve that boredom. Though its first task—to find a particle called the Higgs boson—has been talked up endlessly, the Higgs is actually just unfinished business from the Standard Model. The Higgs is the missing element needed for mass to exist. Since mass clearly does exist, an absence of Higgs would be a real shock. But assuming it is there, as everyone expects, the exciting stuff will be what happens afterwards.

That journey beyond the Standard Model is what the LHC was really built for. The machine itself is a pair of ring-shaped pipes, each 27km long, buried 100 metres down in a layer of rock between Geneva and the Jura mountains. The pipes are surrounded by powerful magnets that guide and accelerate the particles within, so that they whizz round in opposite directions at close to the speed of light. This gives them enormous energy and, because energy and mass are two aspects of the same thing, enormous mass as well.

The collisions between these particles that are the purpose of all this engineering take place in four huge particle-detecting machines buried in caverns on the ring's circumference. The pipes—and the streams of protons they are carrying—cross in the middle of each of these machines. When the protons from opposing streams bash into each other, the alchemy of subatomic physics creates new, massive and generally unstable particles—of which the Higgs should be one example. These quickly decay into showers of daughter particles that shoot out through concentric layers of detectors made of materials such as liquid argon and the purest crystals of silicon available. Each layer is designed to measure the passage of a different class of daughter. By analysing the daughters, the nature of the massive parents that gave birth to them can be worked out.

All this happens fast. Very fast. When the LHC is running at full speed, each detector will have to deal with a billion collisions a second. That is way beyond what even the best modern computers can study thoroughly, so most are given a cursory glance and thrown away. The truly promising—a few hundred a second—are stored for future examination.

Unwrapping reality

The first big discovery probably will be the Higgs. But not necessarily. Theory suggests that something called a neutralino would require about the same amount of energy as a Higgs to make, and so it might turn up at about the same time. A neutralino is a very different sort of beast—one that promises to lead physics into the promised land that is called supersymmetry.

Supersymmetry brings hope that physics will be able to jettison the Standard Model's arbitrary fiddle factors. The price it extracts for doing so is to double the number of particles needed to make sense of the universe. Neutralinos are (or, at least, are predicted to be) the lightest and most stable of these new particles. And their stability means they may also solve a cosmological mystery, which is that a quarter of the universe seems to be made of dark matter that can be detected only by its gravitational interactions. Many physicists think this dark matter is made largely of neutralinos.

That neutralinos feel gravity but not electromagnetism makes them hard to detect. (They also feel the weak nuclear force, but that, as its name suggests, is little help.) The way to find a neutralino, therefore, is to note everything else that comes out of a collision and see if any energy is missing. If that missing energy matches the expected energy of a neutralino, then that is probably what has escaped detection.

A similar trick will be used to look for gravitons—hypothetical particles that may carry the force of gravity. These, too, would be an extension to the Standard Model. Moreover, if their missing energies turn out to have a particular set of values, it will be evidence that they live part of their lives in a hitherto undetected fifth dimension (the other four being length, breadth, height and time). That, in turn, will cast light on the complex field of string theory, which is the best available “theory of everything”, even though it requires the existence of not five, but 11 dimensions.

Miniature black holes that evaporate in a hail of particles known as the Hawking radiation may also turn up in the detectors. That would allow Stephen Hawking, who predicted such radiation in 1974, to collect a much-deserved Nobel prize—just as discovering the Higgs would surely grant one to Peter Higgs, who realised the need for such a particle in 1964. (Nobel prizes are not awarded to theoreticians until their theories have been proved.)

Indeed, the Higgs itself may do more than merely create mass. Put a bunch of them together and they will repel one another in a way that takes the very fabric of space along with them. They could thus be the

explanation for the sudden inflation that the universe seems to have undergone just after it came into existence. They could even help to explain another 70% of the universe whose nature is unknown—the dark energy that is pushing space apart even now.

With all this to play for, Dr Heuer is a very lucky man indeed. As long as the machine behaves, of course. If it does not—and when you are running something whose operating temperature is just above absolute zero, and which has the power consumption of a small town, you can never be sure—then the SFr6 billion or so (about $5 billion) it has cost will start to look rather pricey. And if that happens, then particle physics may find itself back in the wilderness for good.

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British physics

Newton's law of funding

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In Britain, fundamental physics is in a pickle

ISAAC NEWTON, besides being the founder of modern physics, was also master of Britain's mint. That is a precedent which many British physicists must surely wish had become traditional. At the moment, money for physics is in short supply in Britain. Having spent a lot of cash in recent years, physicists and astronomers are now finding they do not have enough money to use the very facilities they paid to have built.

On December 14th, for example, the British delegation to CERN, Europe's biggest particle-physics laboratory, abstained from a vote to increase the budget to make best use of the Large Hadron Collider (see article). A vote for a rise, British delegates said, would be a vote for job losses elsewhere in physics. The budget was carried nonetheless and Britain is obliged to pay up. Perhaps not coincidentally, the country's government had announced a few days earlier that it would withdraw from the International Linear Collider (ILC), an $8 billion project to build the successor to CERN's new toy. Since America seems almost certain to cut its ILC budget, too, this project looks to be in trouble.

Public funding for research in both particle physics and astronomy used to be handled separately from other bits of physics, as did the building and running of big British-based experiments. On April 1st 2007 these areas were brought together by the formation of the Science and Technology Facilities Council. The result has been that when a relatively mundane particle accelerator called the Diamond Light Source, in Oxfordshire, proved to be some £80m ($160m) more expensive than expected, the axe had to fall on other parts of physics.

The cuts in particle physics are, at least, to future spending. Britain's astronomers are having their current expenditure cut. They can no longer use one of the twin Gemini telescopes, based on Hawaii and in Chile, that British money helped pay for. British membership of telescopes in the Isaac Newton Group on the Canary Islands has also been cancelled, as has British involvement in ground-based studies of the sun.

The government's response to the outcry has been as predictable as the scientists' call for more money. It has announced a review of funding of physics. For their part, researchers hope the budget will not fall like Newton's apple did.

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Grape genetics

Vine times

Dec 19th 2007
From The Economist print edition

The pinot noir genome is sequenced. GM wine, anyone?

AFP

In with the new...

THE battle between those who think character comes from nature and those who think nurture is the key is not confined to students of humanity. It lies at the heart of winemaking, too. For European growers, the variety of grape is important, of course. No one would mistake cabernet sauvignon for sangiovese or riesling for chardonnay. But grape varieties are normally propagated as cuttings; in other words, clones. What creates a wine's character, they argue, is the *terroir*—that mysterious combination of soil and microclimate that gives *appellations contrôlées* their cachet. In other words, the essence of a wine lies in its nurture.

Many New World winemakers would say phooey! to that. Where you grow your grapes matters—but no more than it does for any other crop. The true flavour is encoded in the genes and the consistency of a cloned crop is an asset. Environmental diversity is something to be resisted, not celebrated, since it masks the character of the grape and makes it difficult to produce a consistent product. It is not for nothing that the term “varietal wine” was invented in California.

As in the debate over human character, both sides have a point. But, again as in that debate, the naturist side of things is getting a boost thanks to the huge amounts of data on the role of genes that are flowing in. On December 18th that boost got bigger as the first full genetic sequence of a grape variety (pinot noir, as it happens) was published in the *Public Library of Science*. By unzipping pinot's genes, Riccardo Velasco of the Agricultural Institute of San Michele all'Adige, in Italy, and his team, have not only exposed many of the genetic secrets of this particular grape's flavours, they have also helped open the way for genetically modified wine.

In vino veritas

One surprising finding Dr Velasco made was the huge degree of difference, 11.2% in all, between pinot noir's two sets of chromosomes. Those sets of chromosomes come from the varieties originally crossbred to create the clone. These parental varieties must therefore have been very different from one another, for 11.2% is far more genetic variation than exists between, say, a chimpanzee and a human.

Dr Velasco's efforts have discovered a treasure trove of information for technologically oriented winemakers. His group has found hundreds of genes that encode enzymes which produce flavourings and aromatic compounds. That will help both those who want to make flavours more consistent and those who

want to add novelty.

Knowing the pinot noir genome should also help people who would like to grow grapes in places now off-limits to them—either for climatic reasons or because local diseases would kill them. Florida is one example: it produces a few grapes for the table, but these are muscadines, a different species from those usually used for wine. Its wine production is a miserable one-tenth of one percent of the American market. The reason is that the state is home to diseases that clobber wine grapes. These include a bacterial infection called Pierce's disease, fungal infections such as mildews and rots, and viral diseases such as grape fanleaf virus and corky bark.

If Dennis Gray, a developmental biologist at the University of Florida, has his way, that will change. Dr Gray has been working for years on making vines resistant to these diseases by modifying their genes. This year he began field trials of grapes engineered to resist Pierce's disease and fungal infection.

Many people, though, hope that the problems of disease in grapevines may be solved without the sort of genetic modification that risks provoking consumer boycotts. Genetics may help here, too. An alternative to moving genes from one strain to another—the usual definition of genetic modification—is to create new varieties the traditional way by cross pollination, and then employ genetic-sequencing techniques to find out which progeny of such crosses have desirable combinations of genes in them.

Dr Gray is sceptical about this approach. When wild species of grape that have good disease resistance are bred with cultivated varieties possessing great qualities of flavour, he says, the result is almost always a wine of lesser quality that has only some of the desired disease resistance. Better, he thinks, to pick your genes precisely and deliberately engineer them into the target. Moreover, since the gene-products in question rarely turn up in the flesh of the grape (they are actually produced in the stems, root, leaves and seeds), the wine from a genetically modified vine should not contain them.

Whether that will be enough to persuade European consumers, raised on the mystery of *terroir*, remains to be seen—particularly as the benefits of disease resistance are reaped largely by producers. But a bottle of Californian pinot noir with genetically enhanced flavours might be attractive to those with jaded palettes. As a result, research into genetically modified wine is going on in the Old World, too—even in such stick-in-the-mud places as France and Italy. After all, as one of the characters in Giuseppe di Lampedusa's novel “The Leopard” observes, “if we want things to stay as they are, things will have to change.”

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Atlantic salmon

Ruler of the river

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The Domesday Book of Giant Salmon

A list of the biggest salmon caught since the 18th century is an unexpected hit

THE silvery Atlantic salmon (*Salmo salar*) speaks to two of man's most basic instincts: the need to hunt and the need to tell stories. This may help explain why a lavish, illustrated account of the biggest salmon ever caught has become one of the surprise bestsellers of the season. Constable, the independent British publisher that brought out the weighty volume, exhausted its first print run of 5,000 in just a month, while a special edition, priced at £650 ($1,311), sold out before it was even ready to be shipped.

The compiler, Fred Buller, an 81-year-old former fishing-tackle salesman, reminds readers of the salmon's romantic, if brutish, life story. Born in the icy headwaters of rivers on the east coast of North America, Britain, Iceland, Ireland, Poland, Portugal, Russia, Scandinavia and Spain, baby salmon, or parr, swim far out to sea to fatten up on herring and sprat. After two or three ocean winters (occasionally four), they return to fresh water. The cockfish grow a new set of teeth as well as a mighty kype, a hook-like extension on the lower jaw, which they use to fight off other males. Seeking out the river where they were born, the salmon swim upstream to spawn, fighting the current all the way. After spawning, most die of exhaustion.

The Domesday Book of Giant Salmon: A Record of the Largest Atlantic Salmon Ever Caught
By Fred Buller

Constable; 480 pages; £50

Buy it at
Amazon.com
Amazon.co.uk

It is this return journey from the ocean that yields the biggest fish. Over the years, Mr Buller has trolled through books of fishing records, local newspapers and magazines such as the *Field* or *Fishing Gazette*, filing away small nuggets in the study of his Buckinghamshire home.

His giant salmon are divided into three categories: fish weighing over 50lb (22.7kg) and caught on the fly, and fish of 50-60lb and over 60lb caught by any method. There are dozens of photographs, but it is not the piscatorial pornography that makes this book so exciting so much as the stories Mr Buller has unearthed.

Listed under titles like “The Mysterious Tale of Count Denissoff's 68¼lb Norwegian Salmon” are accounts of the astonishing tenacity of men hell-bent on extracting fish from water. There is C.M. Wells, a shy Eton schoolmaster who, besides teaching classics, had two passions: cricket and fishing. Over a long career he twice bowled out W.G. Grace and also caught 935 salmon, including a dozen of over 50lb.

Two young sons of a Norwegian boatman were playing at fishing, one summer's day in 1923, in a pool that was known to hold big fish on Norway's River Vefsen. The boys procured some twine and borrowed a lure from their unsuspecting father, a three-inch metal spoon which they attached upside down and then threw into the water a few yards behind their boat. A fish took it, ran no more than a yard, and then quickly lay on its side flapping, the spoon so deep down its gullet it couldn't use its gills. The water bailiff's scales put the catch at 55lb, a monster more than four feet long and nearly 30 inches (75cm) around the middle.

Most fish were not so easily caught. Duncan Grant, a 19th-century shoemaker, liked to fish the River Spey. On one occasion he saw a salmon rise several times to his fly before hooking it, only to have the fish run and hide under a stone. Grant spent seven hours trying to draw out the fish before he settled down on the bank to take a nap, having first passed the line through his teeth to make sure it did not escape. “If he rugs when I'm sleeping”, he told himself. “I think I'll find him noo.” The ruse worked, and 12 hours after he first hooked him, Grant pulled in a 50-pounder.

Not all fishermen are men. Clementine Morison (pictured above) caught a 61-pounder in 1924 just two years after another woman set the British record for a salmon caught on the rod. Georgina Ballantyne was said to cast so beautifully that her father preferred to row the boat and watch her rather than fish himself. Two months ago internet chatrooms began racing with a rumour that a cock salmon nearly five feet long and the best part of 50 inches in girth had been caught in a deep pool near the northern entrance of Loch Ness. The fish was estimated at around 100lb, which would have broken Miss Ballantyne's record. But it was released before it could be weighed and could not be entered into the books. That has not stopped Grant Sutherland, a local ghillie, from pronouncing, as so many of Mr Buller's heroes probably did in their time: “It was way bigger than anything I have ever seen. It was massive.”

The Domesday Book of Giant Salmon: A Record of the Largest Atlantic Salmon Ever Caught.
By Fred Buller.
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World trade

Genghis the globaliser

Dec 19th 2007
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HISTORY is famously about “maps and chaps” while economics has become obsessed with graphs and Greek letters. In a splendidly ambitious new book, two economists, one at Columbia University and the other at Trinity College, Dublin, attempt to link the two, in a 1,000-year history of world trade.

For much of the past millennium, they argue, “the pattern of trade can only be understood as being the outcome of some military or political equilibrium between contending powers.” This was as true of Genghis Khan, whose rampages across the steppes led to the *pax Mongolica* that allowed Eurasian trade to flourish in the 13th century, as it was of the British empire which imposed free trade on large parts of Asia and Africa. Trade expansion has tended to come “from the barrel of a Maxim gun, the edge of a scimitar, or the ferocity of nomadic horsemen”.

Ronald Findlay and Kevin O'Rourke argue that Genghis Khan's marauding armies led, accidentally, to one of the three great events that punctuated the second millennium: the Black Death, which came from China and was spread by the Mongol troops. In the Protestant west of Europe the smaller labour population was able to demand higher real wages, which strengthened the economy, thereby boosting the relative importance of western Europe at the expense of other parts of the old world.

Europeans in the Middle Ages also developed a taste for trade with China and the Indies. When the land-based routes became less accessible after the collapse of the Mongol empire, European traders sought a sea-based alternative. This led directly to the second great event of the millennium—the discovery of the New World. This event was as brutal in its consequences as the Mongol invasions, since it led to the destruction of many indigenous civilisations and, eventually, the enforced enslavement and transportation of some 11m Africans to use as a labour force in the discovered lands. But the silver that the colonists brought back increased the monetisation and commercialisation of the Eurasian economy and led to an increase in trade.

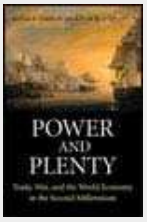
The existence of such a large, developing market proved vital when the third great development, the Industrial Revolution, began in 18th-century Britain. The New World removed Malthusian constraints, which, until then, had meant that higher population growth could be achieved only at the expense of lower living standards. Britain was thus able to concentrate on manufacturing and import its food and raw materials. This strategy could not have been achieved without Britain's imperial muscle—in particular, the ability of the Royal Navy to protect trade routes. It was, as the authors explain, a “mercantilist world where unilateral free trade and a pacific stance were not viable options”.

As other countries copied the British model, a new era of globalisation began to emerge, which was interrupted in the 20th century by two world wars and a depression. It was only in 1972 that global trade regained the level it would have achieved if pre-1913 trends had been maintained. Now a second era of globalisation has arrived, allowing other parts of the world—notably Asia—to catch up with Europe and North America, which had leaped so far ahead in the 19th and early 20th centuries.

This is a big story to tell, and, at times, the accumulation of detail slows the book down. “Power and Plenty” is not an entertaining read in the manner of another work with a similarly broad sweep, Jared Diamond's 1997 bestseller, “Guns, Germs and Steel”. But it is an excellent reference book for anyone wanting a better understanding of economic developments in the last millennium.

Princeton University Press; 624 pages; $39.50 and £23.95

Power and Plenty: Trade, War, and the World Economy in the Second Millennium
By Ronald Findlay and Kevin H. O'Rourke



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Chemistry in cooking

Molecular gastronomy

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From The Economist print edition

PARAETHYLPHENOL and paravinylphenol are two compounds essential to the flavour of well-aged burgundy. Hervé This, the author of this odd but captivating little book and one of the founders—with a Hungarian-born physicist, Nicholas Kurti—of molecular gastronomy or kitchen science, tried “improving” the taste of cheap wine by adding those compounds to it. One person to whom he served it complained of a chemical odour. “An astonishing remark”, Mr This huffs, “because isn't everything a chemical? The foods we eat, the tools we cook with, we ourselves?”

Perhaps, but is anything more likely to repel a reader than the prospect of having the taste of *coq au vin* explained through a bunch of letters and superscripted numbers? Fortunately, Mr This keeps his feet in the kitchen: “It is time”, he writes, “to discover the very substance of cooking, avoiding remarks like, ‘it is methylmercaptan that makes urine smell after eating asparagus.'”

Practicality guides his investigations. He explains why microwaves cook fish well and meat poorly (they heat only water molecules, and those to just below boiling: in other words, they poach, producing succulent fish but bland meat); why one should dress a salad just before serving (oil penetrates the thin waxy cuticle that coats vegetables, driving out the air that refracts light and gives vegetables their colour); why potatoes are the perfect food to deep-fry (a wealth of starch and sugar on the surface); and why the easiest way to salvage curdled mayonnaise is to wait until the oil separates completely, then just pour it back in, whisking constantly.

His chapter on bread is particularly good: in 12 short pages Mr This takes the reader from dry flour to stale bread, explaining what happens at each stage. Yet if the bread chapter stands out for its clarity and utility, it also points out the inherent oddness of this branch of science. Mr This thinks of himself as a debunker of culinary myths, yet much of what he does merely retraces in the laboratory steps that chefs have taken in the kitchen for years. The most colourful and important debunking was done by Harold McGee, whose vastly superior book “On Food and Cooking” came out 23 years ago, and on whose coat-tails Mr This shamelessly, if entertainingly, rides.

Kitchen Mysteries: Revealing the Science of Cooking.
By Hervé This.
Columbia University Press; 220 pages; $22.95 and £13.50

Kitchen Mysteries: Revealing the Science of Cooking
By Hervé This

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Ike Turner

Dec 19th 2007
From The Economist print edition

Rex Features

Ike Turner, a disreputable rock pioneer, died on December 12th, aged 76

READING Ike Turner's own account of his life, you might suppose that things had come a little too easy. Sex, for example. From the age of six he had walked to school in Clarksdale, Mississippi, past the house of a middle-aged lady called Miss Boozie. Each day she would be there in her thin cotton dress, asking him to feed her chickens. Afterwards she would tidy him up, and then take him to bed and teach him the moves. “In those days they didn't call it abuse,” said Mr Turner later, chortling at the memory. “They called it fun!”

Or take cocaine, which Mr Turner did to such effect in the 1970s and 1980s that he reckoned he had spent $11m on his habit. It started with two friends slipping him a wad of paper with about half a gram inside, in Las Vegas in 1960. He put some in his nose more or less out of curiosity, felt nothing, but was then astounded to find that he wanted to stay up all night writing music, and was still lively the next day. In a short time he was ordering it “by the suitcase” and passing it round to his friends.

Or take Tina. She sashayed up to him one night in St Louis in 1957, Anna Mae Bullock as she was then, just 18 with a wild, wide mouth and incredible legs, and took the mike away from him to show how she could sing. Her voice was a powerhouse. Naturally she joined the band. Mr Turner was vague as to whether they ever married exactly. He got some piece of paper from a photographer's booth in Mexico that seemed to make it official, though afterwards he vaguely remembered being married already with two children. Well, he never pretended to be a good father.

The whole music thing had been pretty casual from the start. The folk at WROX in Clarksdale, accommodating as Miss Boozie, had let him mess around on the radio shows from eight years old, showing him how to cue up records and segue into the next track. He had met bluesmen there, especially Pinetop Perkins, who played piano and was his model. By the end of high school he had his own group, the Kings of Rhythm, and in 1951 when he was 20 they made what was often billed as the world's first rock 'n' roll record: “Rocket 88”, an ode to the Oldsmobile. The interesting distorted guitar on the track, an innovation in itself, was another piece of happenstance: somebody dropped the amplifier, or the rain leaked in on it, as the band drove from Clarksdale to Memphis.

Yet whatever Mr Turner drifted into so easily had a knack of turning bad or getting complicated. He had too many women: 13 or so wives, he reckoned, and plenty more girlfriends and “Ikettes”, in their skimpy satin dresses, lining up outside. The cocaine got him arrested so often that in the end he was sent to jail, and was so scared he would be sodomised that he couldn't sleep for a week. He was there, making a small fortune out of selling on chocolate bars to other inmates, when he and Tina were inducted into the Rock 'n' Roll Hall of Fame in 1991.

Though his musical and entrepreneurial talent was enormous, he had been slow to break out of the “chittlin circuit” of black southern clubs. When he and Tina took off at last—with “A Fool in Love” in 1960—it was Tina's raucous voice, not his pounding guitar in his own song, that made the difference. The same was true of their first million-seller, “Proud Mary” (1971), where the gyrating Tina stole the show from Ike, unsmiling behind her in his high fedora and dark glasses. With “River Deep—Mountain High”, it had been worse: Tina sang, Phil Spector produced his waterfalls of sound, and Mr Turner was barred from the recording sessions.

Perhaps that was why he beat her. By her account, made public in her autobiography in 1986 and then turned into a film, “What's Love Got to Do With It?” in 1993, he broke her nose and her jaw, burned her with cigarettes, scalded her with boiling coffee and whipped her with a walking stick. Mr Turner sometimes denied everything, calling the film in particular “a bunch of shit” which he should have sued Disney for making. At other times he would admit to slapping Tina occasionally. As a man who had been a talent scout for years in the Delta, he naturally took charge of her career, making her change her name and urging her into an auburn wig and sexier high heels. Having done all that, he might also “without thinking”, knock her to the ground.

Fighting over tissues

The sexual storms on-stage and off came to a head in Dallas in 1976, when he and Tina fought over a box of tissues in the car and she dared, for the first time, to hit back at him. That ended the marriage, and by 1978 she had divorced him. His career disintegrated. After a lull, hers soared.

He clawed back eventually, giving up drugs and winning a Grammy, his first for a solo album, in 2006. In 1999 he produced a counterblast to Tina, “Takin' Back My Name”, in which he described his preacher-father's beating by a white mob and a stepfather who thrashed him with barbed wire. He remained peculiarly vague about both his notoriety and his fame, saying nothing about the first and feeling nothing, he insisted, about the second. But critics noticed that the latest woman in his life, Audrey Madison, sang Tina's songs wearing Tina wigs and Tina jumpsuits, and wondered whether Mr Turner still assumed that stars were so easy to shape.

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Overview

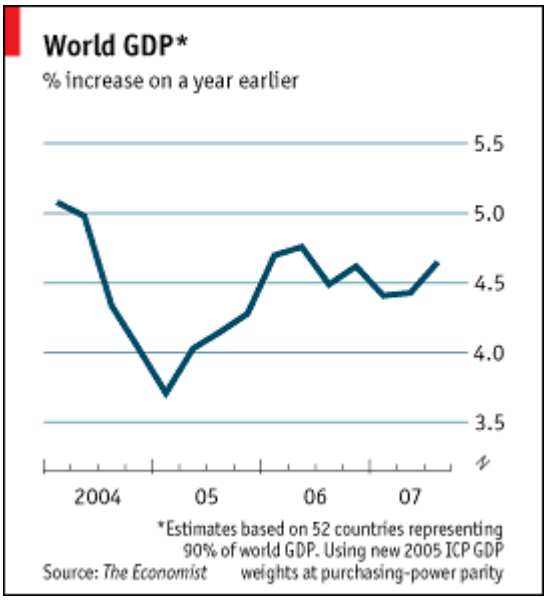
Dec 19th 2007
From The Economist print edition

Consumer prices in **America** rose by 0.8% in November, leaving them 4.3% higher than a year earlier. On the core measure of prices, which excludes food and energy costs, inflation inched up from 2.2% to 2.3%. Industrial production rose by 0.3% in November, an increase of 2.1% from November 2006. Housing starts fell 3.7% in the month and were down 24.2% from a year earlier.

America's **current-account deficit** narrowed from $188.9 billion (5.5% of GDP) to $178.5 billion (5.1% of GDP) in the third quarter.

In the **euro area** consumer prices rose 3.1% in the year to November, revised from 3%.

Britain's inflation rate was 2.1% in November, unchanged from October and just above the government's 2% target.



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Output, prices and jobs

Dec 19th 2007
From The Economist print edition

Output, prices and jobs

% change on year ago

	Gross domestic product				Industrial production	Consumer prices			Unemployment
	latest	qtr*	2007†	2008†	latest	latest	year ago	2007†	rate‡, %
United States	+2.8 Q3	+4.9	+2.1	+2.0	+2.1 Nov	+4.3 Nov	+2.0	+2.8	4.7 Nov
Japan	+1.9 Q3	+1.5	+1.9	+1.7	+4.7 Oct	+0.3 Oct	+0.4	nil	4.0 Oct
China	+11.5 Q3	na	+11.5	+9.9	+17.3 Nov	+6.9 Nov	+1.9	+4.7	9.5 2006
Britain	+3.2 Q3	+3.0	+3.1	+2.0	+1.0 Oct	+2.1 Nov§	+2.7	+2.3	5.3 Oct††
Canada	+2.9 Q3	+2.9	+2.5	+2.0	+1.4 Sep	+2.5 Nov	+1.4	+2.3	5.9 Nov
Euro area	+2.7 Q3	+2.8	+2.6	+1.9	+3.8 Oct	+3.1 Nov	+1.9	+2.2	7.2 Oct
Austria	+3.3 Q3	+3.0	+3.1	+2.6	+1.3 Sep	+3.1 Nov	+1.6	+1.9	4.3 Oct
Belgium	+2.6 Q3	+2.2	+2.6	+2.0	+0.6 Oct	+2.9 Nov	+1.5	+1.8	11.1 Oct‡‡
France	+2.1 Q3	+2.9	+1.9	+1.8	+4.0 Oct	+2.4 Nov	+1.4	+1.5	7.9 Q3§§
Germany	+2.5 Q3	+2.8	+2.6	+2.0	+5.9 Oct	+3.1 Nov	+1.5	+2.2	8.6 Nov
Greece	+3.8 Q3	+3.6	+3.8	+2.9	−0.1 Oct	+3.9 Nov	+2.9	+2.8	7.6 Aug
Italy	+1.9 Q3	+1.7	+1.7	+1.3	−1.5 Oct	+2.4 Nov	+1.8	+2.0	6.0 Q2
Netherlands	+4.1 Q3	+7.2	+2.8	+2.2	+2.3 Oct	+1.9 Nov	+1.1	+1.7	4.2 Nov††
Spain	+3.8 Q3	+2.8	+3.7	+2.5	+2.6 Oct	+4.1 Nov	+2.6	+2.8	8.1 Oct
Czech Republic	+6.0 Q3	+5.8	+5.7	+4.6	+8.4 Oct	+5.0 Nov	+1.5	+2.7	5.6 Nov
Denmark	+1.8 Q3	+5.3	+1.5	+1.5	−0.8 Oct	+2.5 Nov	+1.7	+1.6	3.0 Oct
Hungary	+1.0 Q3	+1.2	+2.0	+3.0	+5.9 Oct	+7.1 Nov	+6.4	+7.8	7.3 Oct††
Norway	+3.1 Q3	+5.6	+3.1	+2.9	+4.6 Oct	+1.5 Nov	+2.6	+0.4	2.6 Sep††
Poland	+6.4 Q3	na	+6.5	+5.2	+10.6 Oct	+3.6 Nov	+1.4	+2.2	11.3 Oct‡‡
Russia	+7.6 Q3	na	+7.2	+6.6	+4.7 Nov	+11.5 Nov	+9.0	+8.9	5.8 Oct‡‡
Sweden	+2.5 Q3	+2.4	+3.2	+2.9	+1.0 Oct	+3.3 Nov	+1.7	+2.0	5.2 Nov‡‡
Switzerland	+2.9 Q3	+1.3	+2.7	+2.0	+9.8 Q2	+1.8 Nov	+0.5	+0.8	2.7 Nov‡‡
Turkey	+1.5 Q3	na	+4.9	+4.8	+7.9 Oct	+8.4 Nov	+9.9	+8.7	9.2 Q3‡‡
Australia	+4.3 Q3	+4.1	+4.2	+3.5	+4.6 Q2	+1.9 Q3	+3.9	+2.4	4.5 Nov
Hong Kong	+6.2 Q3	+7.0	+6.1	+4.5	−2.1 Q3	+3.2 Oct	+2.0	+2.0	3.6 Nov††
India	+8.9 Q3	na	+7.9	+7.7	+11.8 Oct	+5.5 Oct	+7.3	+6.5	7.6 2006
Indonesia	+6.5 Q3	na	+6.2	+6.1	−1.4 Sep	+6.7 Nov	+5.3	+6.3	9.8 Feb
Malaysia	+6.7 Q3	na	+6.0	+5.7	+4.7 Oct	+1.9 Oct	+3.1	+2.0	3.4 Q2
Pakistan	+7.0 2007**	na	+6.4	+5.9	+7.4 Sep	+8.7 Nov	+8.1	+6.9	6.2 2006††
Singapore	+8.9 Q3	+6.4	+7.7	+4.8	+0.9 Oct	+3.6 Oct	+0.4	+1.8	1.7 Q3
South Korea	+5.2 Q3	+5.4	+5.0	+4.7	+17.8 Oct	+3.5 Nov	+2.1	+2.5	3.2 Nov
Taiwan	+6.9 Q3	na	+4.3	+4.4	+15.9 Oct	+4.8 Nov	+0.2	+1.4	3.9 Oct
Thailand	+4.9 Q3	+6.3	+4.5	+4.9	+12.2 Oct	+3.0 Nov	+3.5	+2.0	1.2 Sep
Argentina	+8.7 Q3	+11.7	+8.3	+6.0	+4.4 Oct	+8.5 Nov	+10.0	+8.8	8.1 Q3‡‡
Brazil	+5.7 Q3	+6.9	+4.7	+4.5	+10.3 Oct	+4.2 Nov	+3.0	+3.6	8.7 Oct‡‡
Chile	+4.1 Q3	−2.5	+5.4	+4.6	+5.0 Oct	+7.4 Nov	+2.1	+4.2	7.7 Oct††‡‡
Colombia	+6.9 Q2	+4.4	+6.7	+5.6	+6.0 Sep	+5.4 Nov	+4.3	+5.5	10.0 Oct‡‡
Mexico	+3.7 Q3	+5.9	+3.0	+2.8	+3.0 Oct	+3.9 Nov	+4.1	+4.0	3.9 Oct‡‡
Venezuela	+8.7 Q3	na	+7.9	+5.1	+2.7 Sep	+20.7 Nov	+15.8	+18.1	8.5 Q3‡‡
Egypt	+6.9 Q3	na	+7.1	+7.3	+7.5 2007**	+6.9 Nov	+12.1	+9.2	8.1 Q2‡‡
Israel	+4.8 Q3	+6.1	+5.3	+4.2	+0.7 Sep	+2.8 Nov	−0.3	+0.4	7.3 Q3
Saudi Arabia	+4.3 2006	na	+4.7	+5.6	na	+5.4 Oct	+2.7	+4.0	na
South Africa	+5.1 Q3	+4.7	+4.9	+5.1	+5.2 Oct	+7.9 Oct	+5.4	+6.2	25.5 Mar‡‡
MORE COUNTRIES Data for the countries below are not provided in printed editions of *The Economist*									
Estonia	+6.4 Q3	+7.4	+7.1	+5.3	+5.9 Oct	+9.1 Nov	+4.6	+6.4	5.7 Sep
Finland	+4.1 Q3	+3.0	+4.1	+3.2	−1.9 Oct	+2.9 Nov	+2.1	+2.6	6.8 Nov
Iceland	+4.3 Q3	+9.9	+1.8	+3.2	+7.6 2006	+5.9 Dec	+7.0	+5.0	0.8 Oct‡‡
Ireland	+5.4 Q2	−5.5	+4.6	+3.5	+10.2 Oct	+5.0 Nov	+4.4	+4.7	4.6 Nov
Latvia	+10.9 Q3	na	+10.7	+7.5	−1.6 Oct	+13.7 Nov	+6.4	+10.1	5.2 Sep
Lithuania	+10.8 Q3	+10.0	+9.2	+7.4	na	+7.8 Nov	+4.4	+5.6	4.3 Nov
Luxembourg	+5.3 Q2	+5.3	+5.0	+4.4	−5.1 Sep	+3.2 Nov	+2.0	+2.3	4.3 Oct‡‡
New Zealand	+3.8 Q2	+3.4	+3.1	+2.8	+0.5 Q2	+1.8 Q3	+3.5	+2.5	3.5 Q3
Peru	+8.8 Sep	na	+8.0	+6.9	+9.4 Sep	+3.5 Nov	+1.5	+1.7	7.4 Oct‡‡
Philippines	+6.6 Q3	+1.1	+6.9	+5.0	−1.0 Sep	+3.2 Nov	+4.7	+2.7	7.8 Q3‡‡
Portugal	+1.8 Q3	−0.1	+1.8	+2.0	+3.6 Oct	+2.8 Nov	+2.4	+2.3	7.9 Q3‡‡
Slovakia	+9.4 Q3	na	+8.5	+6.5	+17.3 Oct	+3.1 Nov	+4.3	+2.7	7.9 Oct
Slovenia	+6.3 Q3	na	+5.8	+4.6	+10.9 Oct	+5.7 Nov	+2.3	+3.4	7.4 Oct‡‡

*% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. ‡National definitions. §RPI inflation rate 4.3% in Nov. **Year ending June. ††Latest three months. ‡‡Not seasonally adjusted. §§New series.

Sources: National statistics offices and central banks; Thomson Datastream; Reuters; Centre for Monitoring Indian Economy; OECD; ECB

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The Economist commodity-price index

Dec 19th 2007
From The Economist print edition

The Economist commodity-price index

2000=100

	Dec 11th	Dec 18th*	% change on one month	% change on one year
Dollar index				
All items	215.3	217.4	+3.4	+17.4
Food	210.8	218.2	+10.3	+42.3
Industrials				
All	221.1	216.3	–4.5	–4.5
Nfa†	176.4	177.4	+1.3	+26.5
Metals	245.6	237.6	–6.6	–13.1
Sterling index				
All items	160.1	163.6	+5.9	+14.3
Euro index				
All items	135.5	139.8	+6.3	+7.5
Gold				
$ per oz	808.65	794.15	+0.1	+28.1
West Texas Intermediate				
$ per barrel	89.32	90.73	–8.4	+44.7

*Provisional †Non-food agriculturals.

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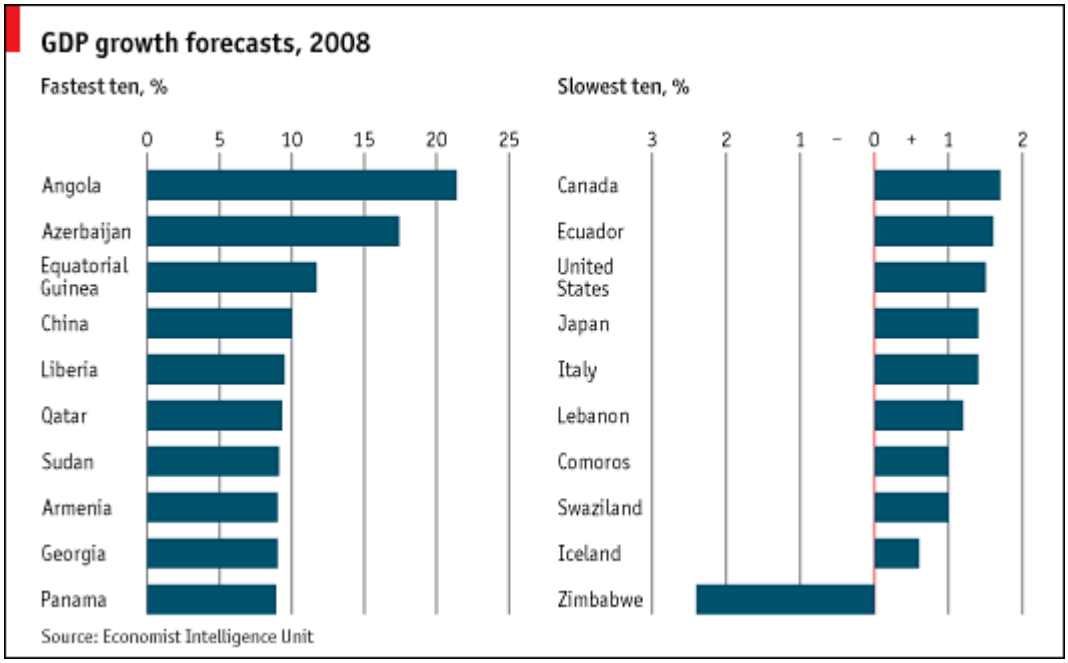
GDP growth forecasts, 2008

Dec 19th 2007
From The Economist print edition



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Trade, exchange rates, budget balances and interest rates

Dec 19th 2007
From The Economist print edition

Trade, exchange rates, budget balances and interest rates

	Trade balance* latest 12 months, $bn	Current-account balance latest 12 months, $bn	Current-account balance % of GDP 2007†	Currency units, per $ Dec 18th	Currency units, per $ year ago	Budget balance % of GDP 2007†	Interest rates, % 3-month latest	Interest rates, % 10-year gov't bonds, latest
United States	−806.4 Oct	−752.4 Q3	−5.5	–	–	−1.2	4.16	4.12
Japan	+107.6 Oct	+211.3 Oct	+4.7	113	118	−2.6	0.73	1.51
China	+259.8 Nov	+249.9 2006	+11.4	7.39	7.82	0.2	4.35	4.87
Britain	−165.8 Oct	−86.6 Q2	−3.3	0.50	0.51	−3.1	6.41	4.74
Canada	+49.0 Oct	+16.3 Q3	+1.5	1.01	1.16	1.0	3.86	4.02
Euro area	+51.7 Oct	+34.2 Sep	+0.1	0.69	0.76	−0.9	4.88	4.32
Austria	+0.9 Sep	+12.3 Q2	+2.8	0.69	0.76	−0.6	4.88	4.40
Belgium	+19.2 Oct	+13.0 Jun	+2.5	0.69	0.76	−0.4	4.94	4.42
France	−47.4 Oct	−28.3 Oct	−1.2	0.69	0.76	−2.4	4.88	4.39
Germany	+263.1 Oct	+207.8 Oct	+5.8	0.69	0.76	−0.3	4.88	4.31
Greece	−52.1 Sep	−43.2 Oct	−13.6	0.69	0.76	−2.7	4.88	4.59
Italy	−12.0 Oct	−47.7 Sep	−2.5	0.69	0.76	−2.4	4.88	4.59
Netherlands	+54.4 Oct	+57.2 Q3	+7.6	0.69	0.76	−0.3	4.88	4.38
Spain	−126.0 Sep	−126.1 Aug	−9.3	0.69	0.76	1.8	4.88	4.41
Czech Republic	+3.7 Oct	−5.4 Oct	−3.8	18.2	21.0	−3.9	4.09	4.72
Denmark	+4.2 Oct	+4.3 Oct	+1.5	5.18	5.66	3.8	5.00	4.40
Hungary	−0.8 Oct	−6.8 Q2	−5.8	177	193	−6.0	7.50	7.05
Norway	+56.3 Nov	+59.9 Q3	+14.6	5.59	6.19	18.9	5.89	4.69
Poland	−11.7 Oct	−16.2 Oct	−4.1	2.51	2.90	−1.8	5.69	5.95
Russia	+124.0 Oct	+73.5 Q3	+6.1	24.7	26.3	3.0	10.00	6.31
Sweden	+18.5 Oct	+29.4 Q3	+7.0	6.56	6.86	2.9	4.02	4.35
Switzerland	+11.2 Oct	+64.9 Q2	+16.2	1.15	1.22	0.3	2.78	2.99
Turkey	−59.6 Oct	−35.2 Oct	−7.4	1.19	1.43	−2.5	17.13	6.05‡
Australia	−15.9 Oct	−49.9 Q3	−5.8	1.16	1.28	1.6	7.35	6.28
Hong Kong	−21.9 Oct	+24.9 Q2	+9.6	7.80	7.78	2.0	3.73	3.26
India	−66.0 Oct	−9.7 Q2	−1.1	39.5	44.8	−3.4	7.42	8.15
Indonesia	+41.2 Oct	+11.0 Q2	+2.4	9,395	9,140	−1.4	8.04	6.61‡
Malaysia	+29.3 Oct	+27.6 Q2	+13.5	3.35	3.58	−3.2	3.62	4.77‡
Pakistan	−15.2 Nov	−7.3 Q3	−4.7	60.7	60.9	−4.6	9.84	8.19‡
Singapore	+35.8 Nov	+46.3 Q3	+24.5	1.46	1.54	0.3	2.56	2.76
South Korea	+17.4 Nov	+9.7 Oct	+1.0	939	932	0.7	5.71	5.79
Taiwan	+17.6 Nov	+28.4 Q3	+6.3	32.6	32.7	−2.1	2.70	2.61
Thailand	+10.5 Oct	+12.9 Oct	+4.6	33.7	35.9	−1.9	3.90	4.72
Argentina	+10.7 Oct	+7.4 Q2	+2.7	3.14	3.06	1.2	14.50	na
Brazil	+41.4 Nov	+7.4 Oct	+0.7	1.81	2.15	−1.8	11.18	6.16‡
Chile	+24.8 Nov	+6.7 Q3	+4.4	499	527	8.8	6.36	4.78‡
Colombia	−1.8 Sep	−4.8 Q2	−3.8	2,011	2,254	−0.2	8.90	5.88‡
Mexico	−12.1 Oct	−7.5 Q3	−0.5	10.9	10.8	nil	7.44	8.08
Venezuela	+23.4 Q3	+20.2 Q3	+9.2	5,675	3,283§	−1.4	11.35	6.55‡
Egypt	−15.8 Q2	+2.7 Q2	+1.8	5.53	5.71	−7.5	6.98	5.50‡
Israel	−9.7 Nov	+5.9 Q3	+3.8	3.95	4.19	−0.1	4.64	5.71
Saudi Arabia	+146.6 2006	+98.9 2006	+25.5	3.76	3.75	21.8	4.01	na
South Africa	−11.3 Oct	−19.9 Q3	−6.8	6.92	7.02	1.0	11.30	8.50
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*							
Estonia	−4.1 Sep	−3.2 Oct	−14.8	10.9	11.9	3.0	7.30	na
Finland	+12.7 Oct	+14.2 Oct	+6.2	0.69	0.76	4.4	4.65	4.38
Iceland	−1.6 Nov	−3.0 Q3	−16.9	63.0	69.1	5.3	14.15	na
Ireland	+36.9 Sep	−10.5 Q2	−5.2	0.69	0.76	1.2	4.88	4.48
Latvia	−7.2 Oct	−6.4 Sep	−22.2	0.48	0.53	0.4	9.46	na
Lithuania	−6.7 Oct	−4.6 Oct	−14.5	2.40	2.62	−0.5	7.22	na
Luxembourg	−5.9 Sep	+4.6 Q2	na	0.69	0.76	1.0	4.88	na
New Zealand	−4.2 Oct	−9.2 Q2	−8.1	1.33	1.44	4.6	7.30	6.37
Peru	+8.6 Oct	+2.2 Q3	+1.9	2.98	3.20	0.7	5.00	na
Philippines	−4.3 Sep	+6.4 Jun	+6.7	42.0	49.4	−0.8	6.56	na
Portugal	−24.1 Sep	−18.4 Sep	−8.5	0.69	0.76	−3.0	4.88	4.50
Slovakia	−0.9 Oct	−4.0 nil	−4.7	23.3	26.5	−2.9	4.14	4.62
Slovenia	−2.8 Oct	−1.6 Sep	−3.3	0.69	0.76	−0.5	na	na

*Merchandise trade only. †*The Economist* poll or Economist Intelligence Unit forecast. ‡Dollar-denominated bonds. §Unofficial exchange rate.

Sources: National statistics offices and central banks; Thomson Datastream; Reuters; JPMorgan; Bank Leumi le-Israel; Centre for Monitoring Indian Economy; Danske Bank; Hong Kong Monetary Authority; Standard Bank Group; UBS; Westpac.

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Markets

Dec 19th 2007
From The Economist print edition

Markets

	Index Dec 19th	% change on one week	% change on Dec 29th 2006 in local currency	% change on Dec 29th 2006 in $ terms
United States (DJIA)	13,232.5	–1.5	+6.2	+6.2
United States (S&P 500)	1,455.0	–1.5	+2.6	+2.6
United States (NAScomp)	2,596.0	–2.1	+7.5	+7.5
Japan (Nikkei 225)	15,207.9	–5.2	–11.7	–7.1
Japan (Topix)	1,469.8	–6.2	–12.6	–8.0
China (SSEA)	5,074.1	–6.6	+80.2	+90.5
China (SSEB, $ terms)	349.2	–3.1	+153.9	+168.4
Britain (FTSE 100)	6,279.3	–3.9	+0.9	+4.1
Canada (S&P TSX)	13,358.1	–2.7	+3.5	+19.2
Euro area (FTSE Euro 100)	1,349.2	–3.3	+5.5	+15.3
Euro area (DJ STOXX 50)	4,309.1	–3.2	+4.6	+14.2
Austria (ATX)	4,430.8	–1.5	–0.7	+8.4
Belgium (Bel 20)	4,057.6	–2.4	–7.5	+1.0
France (CAC 40)	5,509.4	–3.8	–0.6	+8.6
Germany (DAX)*	7,850.7	–2.0	+19.0	+30.0
Greece (Athex Comp)	5,020.2	–3.0	+14.2	+24.8
Italy (S&P/MIB)	38,248.0	–3.0	–7.7	+0.8
Netherlands (AEX)	502.7	–2.5	+1.5	+10.8
Spain (Madrid SE)	1,657.2	–3.7	+6.6	+16.4
Czech Republic (PX)	1,796.7	–2.3	+13.1	+30.0
Denmark (OMXCB)	440.4	–4.6	+3.8	+13.3
Hungary (BUX)	26,047.3	–2.3	+4.8	+13.2
Norway (OSEAX)	547.8	–2.8	+9.0	+21.5
Poland (WIG)	55,130.6	–5.6	+9.4	+26.4
Russia (RTS, $ terms)	2,269.1	–3.1	+10.8	+18.1
Sweden (Aff.Gen)	335.0	–5.7	–8.3	–4.4
Switzerland (SMI)	8,467.1	–4.4	–3.6	+2.1
Turkey (ISE)	54,223.6	–3.6	+38.6	+65.4
Australia (All Ord.)	6,292.6	–6.6	+11.5	+21.7
Hong Kong (Hang Seng)	26,732.9	–8.5	+33.9	+33.5
India (BSE)	19,079.6	–6.0	+38.4	+54.9
Indonesia (JSX)	2,646.2	–5.9	+46.6	+40.3
Malaysia (KLSE)	1,385.5	–3.4	+26.4	+33.0
Pakistan (KSE)	14,508.3	–0.8	+44.5	+44.8
Singapore (STI)	3,369.3	–6.1	+12.8	+18.7
South Korea (KOSPI)	1,861.5	–3.3	+29.8	+28.5
Taiwan (TWI)	7,807.4	–9.6	–0.2	–0.1
Thailand (SET)	813.9	–3.2	+19.7	+28.6
Argentina (MERV)	2,125.7	–4.7	+1.7	–0.7
Brazil (BVSP)	61,096.0	–5.3	+37.4	+62.4
Chile (IGPA)	13,563.8	–5.6	+9.6	+16.9
Colombia (IGBC)	10,411.7	–4.6	–6.7	+3.9
Mexico (IPC)	29,255.0	–3.5	+10.6	+10.4
Venezuela (IBC)	36,537.7	–4.6	–30.0	–55.5
Egypt (Hermes)	89,993.0	+4.3	+46.8	+51.5
Israel (TA-100)	1,127.8	–3.9	+22.4	+30.6
Saudi Arabia (Tadawul)	11,350.0	+5.1	+43.1	+42.9
South Africa (JSE AS)	28,526.3	–6.4	+14.5	+16.7
Europe (FTSEurofirst 300)	1,489.3	–3.3	+0.4	+9.7
World, dev'd (MSCI)	1,556.8	–3.9	+4.9	+4.9
Emerging markets (MSCI)	1,189.5	–7.0	+30.3	+30.3
World, all (MSCI)	394.0	–4.2	+7.1	+7.1
World bonds (Citigroup)	720.7	–1.4	+9.5	+9.5
EMBI+ (JPMorgan)	431.6	–0.3	+6.0	+6.0
Hedge funds (HFRX)	1,315.4	–1.3	+3.1	+3.1
Volatility, US (VIX)	22.6	23.6	11.6	(levels)
CDSs, Eur (iTRAXX)†	53.0	–6.1	+127.4	+148.3
CDSs, N Am (CDX)†	86.3	+6.9	+157.9	+157.9
Carbon trading (EU ETS) €‡	22.6	+0.1	+24.0	+35.4

*Total return index. †Credit-default swap spreads, basis points.

Sources: National statistics offices, central banks and stock exchanges; Thomson Datastream; Reuters; WM/Reuters; JPMorgan Chase; Bank Leumi le-Israel; CBOE; CME; Danske Bank; EEX; HKMA; Markit; Standard Bank

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Budget balances

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The global economy faces leaner times. Thankfully, most governments improved their budgetary positions during the fat years. The OECD reckons its mostly rich-country membership cut its fiscal deficit from 4% of GDP in 2003 to 1.6% in 2007. That budget shortfall is set to widen slightly, to 2% of GDP in 2008. Germany is expected to run a broad budget balance, a sharp improvement from a deficit of 4% of GDP in 2003. France and Italy will have made less progress, whereas Britain's deficit will still be close to 3% of GDP. These countries will have little scope to use fiscal policy to support their economies in the bad times. Sweden, like the other Nordic countries, is likely to run a sizeable budget surplus in 2008.

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